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Dumas, Jean-Malik

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CentER

JEAN-MALIK DUMAS

Essays in Behavioral Strategy

TILBURG UNIVERSITY

Essays in Behavioral Strategy

Essays in Behavioral Strategy

Proefschrift

ter verkrijging van de graad van doctor aan Tilburg University op gezag van de
rector magnificus, prof.dr. E.H.L. Aarts, in het openbaar te verdedigen ten
overstaan van een door het college van promoties aangewezen commissie in de
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Jean-Malik Dumas

geboren op 13 december 1969 te Cambrai, Frankrijk

PROMOTOR

prof.dr. A. van Witteloostuijn

COPROMOTOR

dr. E. Golovko

COMMISSIE

prof.dr. J.L. Arrègle

prof.dr. J.M.A. Hennart

prof.dr. R. Mudambi

prof.dr. P. Very

To my father Jean-Marie Dumas (1926-2011) and my children H  lena, Jean-Daniel, Anna-Christina

Preface

I remember the time when I was a teenager; I was eager to learn everything about the world. More than a decade later, I had travelled around the North Hemisphere, studied in France, United States and Japan but my thirst for knowledge wasn't quenched. I was looking for a life of endless learning. Having worked in France, Ukraine and the USA, I thought that doing a Ph.D. would be the next adventure. At this time, I didn't realize that this would lead to a nine-year project. Ram Mudambi, one of my MBA's professors, had told me that Tilburg was the best place in Europe for me. Therefore I decided to contact Xavier Martin and Jean-François Hennart.

My initial Ph.D. project was more related to international business as I wanted to research further some elements of knowledge I acquired during the MBA at Temple. Under the supervision of Philippe Very and later Jean-François Hennart, I moved four years in this direction. Then, I had the idea for the central essay of the present dissertation, namely; "A Glimpse of Eternity". I couldn't stop thinking about it and I decided against all wise recommendations to engage in this new direction. I still remember the moment when I ran the first model on Stata and the unique joy of "seeing the stars". After all, it took me much more time than I had expected but I have absolutely no regret. This was for me more than an intellectual endeavor and I could do it with passion.

Along the way, many people have advised, supported and inspired me. First of all, my father Jean-Marie Dumas gave me the confidence to move forward. Looking in his eyes, I could see a world of unlimited opportunities and I felt ready for life's challenges. I also remember how he seemed to know everything; up to now it helps me to remember how much I still ignore. I had received a lot of energy from my beloved children Héléna, Jean-Daniel and Anna-Christina. They helped me to go beyond the difficult moments of this quest. I am thankful to

my beloved Natacha, whose encouragements were essential during the final steps of this work.

Within the academic community, I received advices from Ram Mudambi, Pierre Laurent Bescos and Jean-Luc Arrègle. I learned very much from the collaboration with Geetha Garrib on the first essay. I am thankful to Philippe Very and Jean-François Hennart for guiding me in the early stages of my work and allowing me to pursue my research further after my interests have evolved. Thanks to Louis Mulotte for reviewing and commenting some of my drafts. Last but not least, I am very grateful for my promoters Arjen van Witteloostuijn and Elena Golovko for their guidance, support and experience.

During the past nine years, I have greatly benefited from the research atmosphere in the Management department at Tilburg University. I acknowledge the practical and moral support I received from department members and members of the faculty; Thijs, Ilya, Youtha, Aukje, Gala, Miranda, Mario, David, Marloes, Zhengyu, Bert, Bart, Shivaram, Eric, Zilin, Wolfgang, Adam, Anne-Françoise, Aswin, Ruud, Tal, Jeroen, Geert, Alma, Fons, James, Marjan, Wendy, Cindy, Astrid, Angelique, Mark, Sytse, Nienke, Nancy, Melody, Arjan, Jens, Cédric, Katrin, Gerwin, Xavier, Niels, Harry and Hans. At this specific moment, I realize how much I am blessed to work with so many talented people. With all of my heart, I thank God for all of His blessings and I am looking forward to build further on this initial research project.

Jean-Malik Dumas

Tilburg, February 5th 2016

“All streams flow into the sea, yet the sea is never full.

To the place the streams come from, there they return again.

All things are wearisome, more than one can say.

The eye never has enough of seeing, nor the ear its fill of hearing.”

Ecclesiastes 1:7-9

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Chapter 1

General Introduction

Time and space are physical dimensions; as such they are clearly identifiable, measurable in an objective way. However, human beings experience these two dimensions in a subjective way. Depending on our interest, a lecture of one hour could be very long or very short. Likewise, ten kilometers could be very close for one individual, while very far for someone else. Therefore, it is well accepted that the perception of time and space differs with individuals. To make things worse, the way we experience these physical dimensions is even inconsistent for a given individual. The same person will experience time and space in an elastic way. In other words, at different moments, the same person could experience an hour as being long or short; a kilometer can also be long or short.

These facts are important not only for cognitive psychology and social psychology but also for the field of strategic management. Indeed, as far as perceptions may influence decision makers, it is likely that perceptions influence the course of actions in organizations. This research work positions itself in the field of behavioral strategy and more precisely within the “contextualist” paradigm, defined as “management perception, sense-making, cognitive schema, language, meaning, and enacted environment” (Powell, Lovullo, & Fox, 2011). In a collection of three quantitative studies, we aim to examine the influence of time and space perceptions on cognitions within organizations and ultimately on organizational behavior.

Space and time are often associated; as space is defined by three spatial dimensions, time is traditionally conceptualized as a fourth dimension. This leads to various equations in several disciplines of physics linking time and space (see for example equations of speed in kinematics). As a consequence, we can measure space as being independent of time only if we assume that elements are immobile.

In a similar way, further away from the world of hard sciences, in the realm of human sciences, the experience of the world by human being can only be measured related to specific moments in time. This is true for any perception but for the way people experience space in particular. Moreover, in the context of time and space cognition, we envision a subjective view of time and space, which can be related to the physical world but also charged with symbolism. This is the case when we are discussing organizations, their nature and their boundaries. To the possible exception of virtual ones, organizations combine physical space with abstract knowledge and symbols. When it comes to how employees perceive their work institution, we will speak of a symbolic space. Our work is centered on the exploration of the perception of time and space related to organization and their actions. To this extent, it has also a practical relevance in order to design strategies for better decisions within organizations (Lovallo & Sibony, 2010).

The first essay combines economic theory with social science theories to expose individual and societal determinants of long-term orientation at work. We argue that beliefs in afterlife, anxiety surrounding death and self-esteem have an impact on time discounting tendencies, social identity defensive behavior and how individual project themselves in the future at work respectively. Additionally, we present arguments explaining generational differences around these issues. The hypotheses are tested on a cross-sectional survey of 369 employees from various organizations using a multivariate regression. Results are supporting an effect of belief in afterlife, death anxiety, self-esteem and generational differences on individual long-term orientation at work. This research stresses how largely-ignored sensitive elements of private life and can influence time orientation at work. This chapter links employee's time perception to time orientation at work. To do so we focus on individual death anxiety and belief regarding afterlife belief as they provide respectively a tension on time perception and a point of reference in measuring time. In addition, we propose self-esteem as an important

determinant of the attitude of individual toward the group represented by the firm. Lastly we explore the influence of a societal effect at generation-level. Consequently, this study establishes a link between individual cognitions of time and the symbolic space represented by the organization. Understanding the time horizon of employees in relation to the focal organization has also practical implications such as the possibility to design strategies aimed at keeping key personnel.

In the second essay, we rely on extant research in psychology that shows that individuals and groups are trying to deny their own finitude. Until recently, the issue received little attention from management researchers. This study investigates how the loss of a member in a top management team can impact the collective cognitive schema of survivors. Using social identity approach we propose a theory about how mortality salience may lead to specific defensive strategies maintaining a longer-term symbolic existence evidenced in later investment decisions. Results from a quantitative analysis on a panel of 129 US public firms over the period 1988-2012 are supporting the existence of a short-lived effect of death salience on firm's asset portfolio composition. We propose and test the moderation of relative performance of the firm and the level of identification between the firm and the deceased. This study contributes to the understanding of the impact of existential concerns on decision makers and corporate strategy.

In the third essay, we investigate how conceptual change may influence the perception of the space of the firm, ultimately influencing decisions about its boundaries. We propose a theory explaining the link between a steady increase of outsourcing in developed economies and the wide application of quality management by many firms. We argue that the “process approach” associated with quality management initiatives introduces a more fine-grained conceptual understanding of firm internal activities and generates a terminology enhancing the comparability of internal process performance with external options. Thus, quality

practices facilitate the adoption of outsourcing. We link quality management with previously established drivers of outsourcing, namely information technology and internationalization. Therefore, to some extent, we view increased outsourcing as a byproduct of quality management practices neglected in prior studies. Using R&D outsourcing activities, we test our theory on an unbalanced panel of Spanish firms over the period of 1990-2008. The results generally support our theory: we show that external R&D expenses are positively associated with prior quality management initiatives. Moreover, quality management and international exposure have complementary effect on R&D outsourcing. The empirical results support predominance of the impact of quality management over IT investment. This means that the conceptual change represented by the “process approach” works to break in smaller elements, “the processes”, the whole concept of the firm.

The three empirical studies follow this introduction in chapters 2 to 4. Furthermore, in chapter 5, we will bring some conclusions; discuss limitations and avenues for future research.

Chapter 2¹

Essay 1: Life, Death and Long-Term Orientation at Work across Generations

INTRODUCTION

Beliefs, attitudes and cognitions have a strong impact on work orientation. Beliefs, attitudes and cognitions are the hidden drivers of behaviors (Fishbein & Ajzen, 1975). While many societies are promoting a long-term view on economic activities through sustainability, we still do not know which mechanisms drive individual long-term orientation in the working context. The goal of this study is to investigate the determinant of individual long-term orientation at work. Doing so, we aim to combine individual belief, attitudes and cognitions with societal influence in order to draw a more complete picture.

Time orientation is the subject of several studies at the country level (Hofstede & Bond, 1988), group-level (Schriber & Gutek, 1987) and individual level (Das, 1987). In particular, long-term orientation (referred hereafter to as LTO) is defined as *“the value of viewing time holistically, valuing both in the past and the future rather than deeming actions important only for their effects in the here and now or the short term. As such, individuals scoring high on LTO value planning, tradition, hard work for future benefit and perseverance”* (Bearden, Money, & Nevins, 2006). According to Hofstede and Bond (1988), LTO is an individual-level characteristic that has some levels of homogeneity in national cultures. LTO influences behavior in general; however our study focuses on the determinants of LTO in relation to the work environment and therefore on LTO as a useful tool to predict organizational behavior.

¹ This chapter is the result of joint work with Geetha Garib.

Within firms, time-orientation research concerns mainly issues of “short-termism”. Indeed, studies have tried to explain why many managers display a very short time-horizon also labeled managerial myopia (Lavery, 2004). In particular, extant research has identified sources of myopia in incentive schemes and their payoff (Souder & Bromiley, 2012; Souder & Shaver, 2010), turnovers (Mannix & Loewenstein, 1993; Palley, 1997), retirement (Antia, Pantzalis, & Park, 2010; Dechow & Sloan, 1991; Matta & Beamish, 2008) and pressure from shareholders and markets (Lavery, 1996; Porter, 1992; Wahal & McConnell, 2000). As Miller (2002) stressed, admitting these elements as causes of short-termism presupposes traditional economic assumptions of bounded rationality and opportunism. Moreover, this view suggests that time orientation is determined by market-wide elements, organizational systems and events uncontrollable by managers.

Because LTO is inherently a concept related to time, we want to explore potential individual-level determinants that are strongly related to time. Next, as our context is work, we want to include some element influencing the attitude to individual toward groups. Lastly, we want to include a societal influence on attitude at work. Following Lavery (2004), we propose that time orientation is determined by individual factors as well as societal factors. Therefore, we aim at extending the research agenda by several ways. Firstly, we investigate belief in afterlife and death anxiety which we propose are largely-ignored individual determinants of LTO in the work context. The concept of time horizon is closely linked to the existence of an end, its nature and perception. To this extent it is very relevant to link belief in afterlife and death anxiety to long term orientation in firms. Secondly, we explore the influence of individual self-esteem on LTO. Because self-esteem refers to the attitude toward the self, it is used in social psychology to understand relations between individual and groups (Breakwell, 1986). We propose it as an important determinant in a study that explores individual LTO in the context of work. Additionally, we still want to consider the existence of a cohort effect by

theorizing and testing the impact of generations on individual LTO at work, in order to propose a theory combining individual-level and societal-level factors. Extant researches about work attitudes stress that attitude toward work are consistent across the lifetime of individuals and subject to homogeneous cohort effects. Moreover, these conclusions are supported by longitudinal studies (Twenge, 2010). Therefore, the concept of generation is well suited to explore a societal effect in our present study.

By combining economic theory and social science theory in order to shed light on the determinants of individual LTO, this study aims to develop an interdisciplinary approach. Using intertemporal decision-making theory and social identity theory, we try to explain the drivers of individual LTO. LTO can have important positive influences on work outcomes/behavior (Zellweger, 2007). Work outcomes are visible consequences of internal mechanisms like organization LTO, which are less visible. Therefore, by developing our understanding of the mechanisms driving LTO, we bring hidden mechanisms to the surface. Doing so, we extend the limited research on death awareness and organizational behavior (Stein & Cropanzano, 2011). The quantitative analysis is performed on an online survey administered in 2012 resulting in 456 participants. The results support strongly an effect of death anxiety and self-esteem on LTO at work, the effect of belief in afterlife is moderately supported and the generational effect is weakly supported.

After this, the paper is structured as follows. Firstly, we expose how belief in afterlife is linked to LTO. Next we investigate the effect of death anxiety on LTO. Thirdly, we emphasize the influence of self-esteem on LTO. Fourthly, we discuss generational differences on LTO. We then describe the sample and methods. Next, we present the results of our empirical analyses. We end with conclusions, discussion and limitations.

THEORY AND HYPOTHESES

Cognitions and beliefs concerning the concept of death are generally difficult to tackle due to its sensitive nature as people may want to avoid the topic. As death cognitions are deeply rooted in the private lives of people, investigating death cognitions in a work context often faces a lot of resistance. Consequently, there is a dearth of empirical research on the impact of death cognition on organizational behavior. Indeed, research covering the subject of death in organizational context are only conceptual (Grant & Wade-Benzoni, 2009; Stein & Cropanzano, 2011). Nevertheless, our theory and quantitative analysis show that death cognitions and self-esteem can have an important influence on attitude toward the organization, which may also strongly impact organizational behavior. We also show that generational differences can lead to differences in individual attitude toward work (Smola & Sutton, 2002b; Twenge & Campbell, 2008). We propose to build and test a theory that incorporates both individual effects and cohort effects, in order to discern individual factors and factors resulting from the social environment. Therefore, death cognitions, self-esteem and generational background can act as drivers for specific individual cognition, e.g., LTO at work. We refer here to LTO at work as an individual-level construct that describe the extent to which individual projects or plans themselves in the future of their current working organization.

This research argues that belief in afterlife, death anxiety, self-esteem and generational background impact individual LTO at work. As a consequence, organizations can benefit from gaining more knowledge on the determinants of employees' LTO.

Additionally, from a generational perspective at the workplace, the study provides an explanation for why younger generations attach less value at work due to LTO differences, which fills a research gap identified by Twenge (2010).

Intertemporal decision making and belief in afterlife

There is a strong tradition of research in economics dealing with time-horizon issues (Frederick, Loewenstein, & O'donoghue, 2002). Under the umbrella of intertemporal decision-making, extensive literature generally stresses that distant outcomes are less valued than proximal ones (Soman et al., 2005). There are disagreements about the way in which the loss of value over time occurs, but there is a striking consensus on the existence of time discounting (Frederick et al., 2002).

We argue that time discounting is due to the fact that death is a sure event happening at a certain time. Apart from a few minor inflexions, the probability of dying increases with age, or in other words time elapsed. Therefore the effective occurrence of a positive outcome in the future is subject to the possibility of death. As the classic poet Jean de La Fontaine puts it:

“In some things, men of sense

Prefer the present to the future tense.”

(La Fontaine, 1668)

Until this point we have kept to the view that death represents the end of life, however, there are some possibility that death could be perceived differently, namely as a transition between states. Some researchers have made initial efforts to investigate how beliefs may change the interpretation of time (Urien, 2007). Obviously, the question whether there is life after death is outside of the scope of this study. However, it must be stressed that belief in life after death (hereinafter BA) is a widely spread belief. Indeed, about the European population, Greeley states the following:

“With the exception of a handful of countries, such as the former East Germany and Slovenia, the majority of the population believes in a life after death. Furthermore, the evidence suggests that there has been no decline in this belief over the past 60 years-if anything there has been an increase ”(Greeley, 1996).

Moreover, BA is not restricted to religious believers but can be present in atheists (Lundh & Radon, 1998).

Belief in life after death modifies the nature of the death event. Consequently, BA can potentially modify the effect of death on time discounting. More precisely, removing the threat of death as the end of action extends the amount of time available to realize expectations. In other words the “invisible limit” to potentialities is removed and choosing the present over the future is not necessarily an answer to the threat that death represents on the realization of delayed outcomes. As Routledge and Arndt state: *“Temporal consciousness cannot be divorced from the awareness of death.”* (Routledge & Arndt, 2005).

We conclude that by extending the available time, BA reduces time discounting and therefore reduces the tendency to focus on the present. Thus, we argue that employees believing in afterlife project themselves more in the future of their working organization than employees without such belief because the time-horizon of afterlife believers is not censored by death considered as the end of everything. For individual working in an organizational context, BA leads to a higher LTO and we hypothesize the following:

Hypothesis 1: Belief after Death (BA) has a positive effect on individual long-term orientation at work

Social identity and death anxiety

We have exposed how the conception of death may influence temporal consciousness and subsequently time orientation. We will now investigate the extent to which LTO could be an answer to the fear of death. It should be noted that in several studies, including the present one, death anxiety and BA are both related to death but not highly correlated (Lundh & Radon, 1998).

As we spend a huge part of our life working in organizations, they represent a key element of our identity. Some organizational theorists even consider identity to be the central feature of firms, creating a boundary that defines what the organization is and its limits (Kogut & Zander, 1996; Santos & Eisenhardt, 2005). As organizations are clearly defined groups, they could be studied under the light of social identity theory (Tajfel, 1982). Viewing employees as members of the firm social group is consistent with an understanding of the self as potentially including elements of the environment. Belk (1988) proposed the notion of an “extended-self”, which can be directly applied to the identification of employees with their working organization (Tian & Belk, 2005).

There are several strands of literature arguing that there is a strong need among human beings to maintain the integrity of the self over time (Florette Cohen, 2004; Sherman & Cohen, 2006). Notably, Terror Management Theory posits the existence of a strong drive toward the preservation of “symbolic identity” in situations of mortality salience (Greenberg, Solomon, & Pyszczynski, 1997). This need for continuity of the self expresses itself by the emergence of defensive behaviors aimed at preserving identity over time. Indeed, if analyzed in terms of social identity death is the ultimate threat because it threatens group membership. By definition, the intensity of death anxiety is the consequence of the perception of death as a threat. Consequently, we propose that individual death anxiety leads to defensive behavior (Sherman & Cohen, 2006). While terror management theory proposes that affirmation of

group values is a way to react to death anxiety, some other empirical work suggests that a reinforced focus on the long-term is also a common individual defense strategy against death anxiety (Liu & Aaker, 2007). Indeed, for members of the “firm” group, focusing on the long-term is an individual coherent answer to a threat on social identity because it extends symbolic group identity over time. Therefore considering the long-term of the organization, workers are directly fighting the threat on their group by transposing themselves in the future. Thus we can hypothesize the following:

Hypothesis 2: Death anxiety has a positive effect on individual long-term orientation at

Self-esteem and Long-term Orientation

In essence, self-esteem refers to our appreciation of ourselves. This appreciation emerges from many antecedents during our life experience among which are processes of social comparison.

There is a theoretical ground supported by empirical evidences that self-esteem has an impact on how individual project themselves in the future in relation to group belonging (Breakwell, 1986). Sherman & Cohen (2006) affirm that “people are motivated to maintain the integrity of the self”. This mirrors the results of research evidencing individual need of stability of the self (Castano, 2004; Castano & Dechesne, 2005; Castano, Yzerbyt, Paladino, & Carnaghi, 2006; Castano, Yzerbyt, Paladino, & Sacchi, 2002). This need for stability also translate in an individual desire to maintain identity over time (Breakwell, 1993). In our context it means

that there is an association between LTO and the level of self-esteem of individuals. Individual with high self-esteem may project themselves in the future of their working organization in an attempt to maintain the continuity of their (high) appreciation of themselves.

In addition, self-esteem varies across generations as Gen Y-ers are reported to have a higher self-esteem compared to other generations (Twenge & Campbell, 2008) and previous research stresses the importance of self-esteem as a correlate of death cognitions (Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). Consequently, a special attention to the level of correlation between independent variables and self-esteem will be given. Finally, it must be noted that the direction of the causality between LTO and self-esteem is debatable as group identification and self-esteem may mutually reinforce each other (Abrams & Hogg, 1988). On one hand, group identification may provide a boost to self-esteem (Grant & Hogg, 2011; Hogg & Terry, 2000; Hogg, Terry, & White, 1995), while on the other hand self-esteem may encourage group identification on the long term as a way to provide continuity of identity.

Hypothesis 3: Self-esteem has a positive effect on individual long-term orientation at work

Generational differences and Long-term Orientation

Several studies focus on intergenerational differences in the workplace by taking into consideration four generations. There seems to be inconsistency concerning the names for

different generations and the time period allocated to those generations (Smola & Sutton, 2002b). By chronological order, the main four generations in the workplace consist of the (1) Swingers/Traditionals/Matures, (2) babyboomers, (3) generation X (Gen X-ers), (4) generation Y/Millennials/the next generation. The first generation of Swingers/Traditionals/Matures refer to persons roughly born after 1933 and before 1946 (Smola & Sutton, 2002b). The babyboom generation roughly falls between 1946 and early 1960s, while Generation X starts in the early 1960s and ends in the early 1980s. From there onwards, the millennium generation starts.

Understanding generational differences can assist in avoiding conflicts due to intergenerational misunderstandings (Gursoy, Maier, & Chi, 2008). Furthermore, managing generational differences seems to be an important point on the agenda of managers in all organizations, which can only be reached if intergenerational differences are identified so that different needs can be met (Cennamo & Gardner, 2008). As a result, understanding intergenerational differences may help to improve organizational performance.

Several psychological traits may differ among generations in the workplace, e.g., self-esteem, narcissism, anxiety, depression, need for social approval, and locus of control (Twenge & Campbell, 2008). These psychological traits can strongly determine organizational behavior. On the one hand, the psychological traits influence the behavior of the employee, for example increased self-esteem can lead to high expectations concerning empowerment and self-fulfillment at the job. On the other hand, Macky, Gardner, Forsyth, Twenge, and Campbell (2008b) point out that the new generation (Generation Y/Millennium generation) needs a different way of management due to their differences in psychological traits. Generation Y shows higher levels of self-esteem, narcissism, anxiety, and depression compared to the previous generations (Twenge & Campbell, 2008). Furthermore, generation Y has a decreased need for social approval and a stronger external locus of control. As a consequence, different

organizational behaviors are requested from managers when dealing with generation Y in contrast to generation X, whereby a more balanced atmosphere can be created.

Smola and Sutton (2002a) report differences in the work values of generation Y compared to previous generations, even though others claim that little evidence exists for differences across generations concerning work values (Macky, Gardner, & Forsyth, 2008a). Smola and Sutton (2002a) provide evidence that generation Y is more likely to be self-centered and feel that work is less central in their lives, while Gen X-ers are more focused on hard work and the right balance between various aspects like work-private life and doing your job while fulfilling individual goals. Therefore, managers need to take into account that a different psychological contract is needed with generation X employees compared to generation Y employees, as these employees will show different patterns of behavior in the workplace.

Concerning LTO, differences across generations are likely to exist. There seems to be some reason to believe that generation Y is less long-term oriented at work than generation X or the babyboom generation. For example, the new generations may be less focused on the future as generation X is more content with instant gratification and generation Y is less loyal to organizations whereby they have a stronger tendency to leave an employer when they are not content (Gursoy et al., 2008). The newer generations X and Y seem to value life above work and feel to a stronger degree that they work to live, while the babyboom generation seems to be more under the impression that one needs to live to work (Angeline, 2011). The work involvement of the newer generation is lower, as they are less likely to work hard and be productive compared to the older generations e.g., generation X and babyboomers (Twenge, 2010). Therefore generation Y seems to be less concerned with the long-term consequences of work. Thus, if new generations place less value on their work, they may demonstrate lower levels LTO compared with previous generations. It is here worthwhile to mention that

differences across generations have been found consistently in empirical studies including samples from North America, Europe and Australia (Twenge, 2010).

Twenge (2010) raises the issue that future research should aim to find explanations why younger generations value work less. Providing evidence that generation Y does not have a strong LTO may improve understanding why generation Y values work to a lesser degree. If people are not interested in work on the long-term as a future prospect which they need to obtain, people may also not value work a lot. LTO drive present behavior. As a result, generation Y may have a low LTO, whereby they are not strongly focused on their present job and they do not express a strong value to their job. Thus, the following hypothesis can be formulated:

Hypothesis 4: Gen Y-ers are more likely to have a lower long-term orientation at work compared to Gen X-ers and Babyboomers.

METHODS

Sample

Consistent with published work in the organizational behavior literature we adopted an online survey data collection procedure (Bakker, Tims, & Derks, 2012; Griepentrog, Harold, Holtz, Klimoski, & Marsh, 2012). We asked a small group of Master² students at a European university to invite participants in this study as a part of their course work. The students were provided with a link to an online survey and an invitation mail for all possible participants. After receiving the latter information, students send out personalized emails including the hyperlink to the survey which was titled work perceptions. Even if the survey was administered by Master students, the target population was composed of employees as evidenced by the average work experience of 18.96 years in the final sample. The survey started with a page stressing the confidentiality of the information gathered for the study and described that participation was completely voluntary. The survey was sent out via the SurveyMonkey survey tool. The original dataset consisted of 456 participants. We aimed at measuring LTO in the context of specific organizational groups, therefore, we excluded participants without any current employment and self-employed persons (in total: 87 participants). The final sample includes 369 employees from various organizations.

The introduction of the survey mentioned that the survey was part of a study on work perceptions in organizations done by a European university. This allowed us to focus on LTO in the work context. In this way, the bias was reduced on the original content of the survey, whereby social desirability was limited. The data was collected between April 2012 and June 2012. It took less than 10 minutes to complete the survey. Table 1 includes the sample characteristics.

² Catherine Deck, Lauren Jenkins, Maurits Roodhart, Johannes Simsch and Tim Verberne have supported me with the data collection. I am very thankful for their contribution to this research project.

Table 1- Sample characteristics (n=369)

	Nominal variables		Continuous variables	
	Type	Per cent (n)	Mean	SD
Gender	Men	50 % (183)		
	Women	50% (186)		
Manager	No manager	63% (231)		
	Manager	37% (138)		
Type of org	Governmental	23% (84)		
	Commercial business	50% (183)		
	Own company	8% (30)		
	Non-profit	11% (42)		
	Other	8% (30)		
Generation	Baby-boomers	30% (113)		
	Generation X	28% (103)		
	Generation Y	42% (153)		
Age (years)			36.75	13.51
Job tenure (years)			2.46	1.11
Total work experience (years)			18.96	13.16

Measures

The survey is presented in appendix 1. All multi-item scales demonstrated a cronbach alpha superior to the threshold of 0.7.

Dependent variable

The dependent LTO variable was measured using a four-item scale (based on planning as a projection in the future) extracted from the Long-Term instrument developed by Bearden et al. (2006). The 4 items are presented in appendix 1 – question 17, they show a high level of internal consistency resulting in a high cronbach's alpha ($\alpha=.75$).

Independent variables

Belief in afterlife³ was measured by a self-developed instrument comprising 2 items: “There is a form of life after death” and “My behavior during life will influence what happens to me after my death”. The response categories were consisting of a 7-point Likert scale ranging from strong disagreement to strong agreement. The items were developed to avoid any association with a specific religious belief. The reliability of this scale is quite high ($\alpha=.88$).

Death anxiety was measured by a version of the Templer's 15-item scale (Templer, 1970) with a high reliability ($\alpha=.80$). The questions were identical to the original scale with 7-point Likert scales ranging from disagreement to agreement in contrast with the initial Yes/No scale. Self-esteem was measured by a 4 item scale. This instrument includes the Single-Item Self-Esteem scale (SISE) (Robins, Hendin, & Trzesniewski, 2001) plus 3 domain-specific

³ The initial version of this scale includes an item asking respondents to which extent they believe they will be able to interact with the present world in their life after death. This item was removed because it reduced the reliability of the scale while keeping it over the accepted standard of 0.6. It should be noted that the results were consistent even when this item was included in the scale.

self-esteem items concerning physical appearance (Hoyle, 1991) , affection (Heatherton & Polivy, 1991)and performance (Heatherton & Polivy, 1991) with a high cronbach's alpha ($\alpha=.84$).

Generations were coded using the age recorded in 2012 according to the following scheme:

Baby boomers for people older than 46;

Generation X for people from 29 until 46 years;

Generation Y for people younger than 29.

Control variables

As it is common practice in psychological research we controlled for a gender effect. To deal with the importance of the organizational context we controlled for profit organization and organizational size. Because it may be difficult to compare self-reported intensity of beliefs, we added a measure of religious attendance to evaluate to what extent belief was linked to a concrete religious practice. Finally managerial position, work experience in the current organization, and work status were used as control variables they may potentially influence the link between employees and their current workplace. It must be noted that issues related to time horizon could be influenced by age. In particular the way employee project themselves in their focal organization could be impacted by the proximity of retirement. However, because generation is among the independent variables it would correlate too much with age. Therefore we decided not to include age as a control. This should not be a concern considering the age characteristics of the sample (average age 36.75 years with 13.51 standard deviation) and the fact that retired individuals were not in the sample.

Managerial position was coded using the survey item that recorded if respondents had to supervise other employees on their job. Religious attendance was measured as a frequency of attending religious services on a 5-point scale varying from “never” to “more than once a week”.

Robustness check

Measures to limit and detect common method bias were both ex-ante and ex-post (Chang, Van Witteloostuijn, & Eden, 2010). In particular, the introduction of the survey and its online nature assured respondent of the confidentiality and anonymity of the questionnaire. Whenever possible questions were fact-based rather than perceptual (i.e. Religious attendance measured in number of meeting attended). Moreover, the construction of items was tested on a small sample for clarity and conciseness. Ex-post, the presence of a common method bias has been tested with various CFA methods as is recommended (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), but the largest factor always accounted for a small amount of the variance (<.30%), whereby a common method bias does not appear to be of great concern for this study.

ANALYSES

To test our hypotheses we did a multivariate ordinary least square regression in two stages. The first stage includes our control variables while we introduced the independent variables in the second stage. We included gender, managerial position, work experience, organizational

size, work status, non-profit organization and religious attendance as control variables. The independent variables are belief in afterlife, death anxiety, self-esteem and generation, while the dependent variable is LTO at work.

Correlations between all control variables, dependent and independent variables are provided in table 2. The signs of correlations are consistent with the direction of the hypotheses. The results do not raise any specific concern (all coefficients under .5) nor does the VIF analysis which reports all value under 5.

Table 2 - Correlation matrix

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1- Long-term orientation	5.27	1.09											
2- Self-esteem	5.38	.98	.25**										
3- Death anxiety	3.70	.84	.101	-.19**									
4- Belief after afterlife	4.16	1.87	.34**	-.02	.11*								
5- Generation Y (0/1)	0.41	0.49	-.25**	-.01	-.01	-.24**							
6- Gender (1/2)	1.50	0.50	.39	-.14**	.25**	.16**	-.01						
7- Manager (0/1)	0.37	0.48	.14**	.11*	-.05	.06	-.17**	-.04					
8- Religious attendance	2.13	1.18	.40**	0.08	-.00	.48**	.25**	.016	.18*				
9- Job tenure	2.76	1.1	.09	.07	.07	.08	.50**	.04	.12*	.15**			
10- Organization size	3.80	1.93	.04	-.06	-.01	.03	.19**	.01	-.07	.00	.13*		
11- Work status (1/2)	1.30	0.46	-.29**	-.03	-.02	.25**	.39**	.07	-.20**	-.18**	-.16**	-.20**	
12- Non-Profit	-	-	-.00	.11*	-.04	-.06	.22**	-.06	.11	-.06	-.21**	-.32**	.03

**p <.01, *p<.05

Results

The results of the regression model to test all four hypotheses can be found in table 3. The overall regression model is significant ($p < .00$) and has an adjusted R squared of 27.5%.

Controlling for gender, managerial position, attendance to religious services, job tenure, organizational size, work status and non-profit organizational status, belief in afterlife has a positive impact on individual LTO at work ($\beta = .138$, $p < .05$ – table 3 column 2) confirming hypothesis 1. With the same control variables, death anxiety has a positive impact on individual LTO at work ($\beta = .125$, $p < .01$) confirming hypothesis 2. Hypothesis 3 is confirmed as self-esteem has a positive impact on LTO at work ($\beta = .244$, $p < .01$). Lastly, generation Y has a slight negative impact on individual LTO at work compared to generation X ($\beta = -.108$, $p < .1$) giving marginal support to hypothesis 4. Thus, all three hypotheses are confirmed but at different levels of significance. Among the control variables, attendance to religious services is highly significant in both the control and full model; the impact is positive meaning that people with higher religious attendance tend to have a higher LTO. Likewise, part-time work status has a significant negative impact on LTO as it was expected. Gender, managerial position, job tenure, organizational size and the non-profit status do not have any significant impact in both the control model and the full model.

Table 3- Results of OLS multiple regression analyses on individual LTO at work

Independent variables	& control	Control Standardized coefficients	Model Full Model Standardized regression coefficients
Death anxiety			.125**
Belief in afterlife			.138*
Self-esteem			.244**
Generation Y			-.108 ⁺
Gender		.048	.025
Manager		.043	.027
Attendance services		.359**	.265**
Job tenure		-.003	.033
Organizational size		.008	.014
Work status (part-time)		-.213**	-.150**
Non-profit organizations		-.042	-.041
R ²		.195	.275
F		13.687	13.625
N=369			

**p <.01, *p<.05, ⁺p<0.1

DISCUSSION

Belief in afterlife has a positive impact on individual LTO at work. While it is practically impossible to use belief in afterlife as a recruitment criterion, it can be useful for recruiters to be aware of the effect it has on individual LTO. To the extent that organizations thrive towards LTO, for example in the ongoing fight against organizational myopia (Chow, Kato, & Merchant, 1996), one needs to take belief in afterlife into consideration. Belief in afterlife extends the time horizon of individuals as it removes the limitations of finitude. As a consequence, belief in afterlife removes the uncertainty of an unpredictable end, whereby releasing the pressure to focus on the present and offers more room for future orientation. Up till now few studies have dared to relate personal beliefs on afterlife to issues of relevance for organizations. The sustainability of organizations can be partially determined by afterlife cognitions.

The second finding shows that death anxiety has a positive impact individual LTO at work. Death anxiety cognitions can incur threats to social identities, e.g., organizational identity. As a consequence, defense mechanisms are triggered in order to preserve our social identity over time. Our understanding of death is relevant for our understanding of life. In life, we might have LTOs to understand what we want to achieve in the future. In the context of individual orientations at work, the relevance of death cognitions may not be self-evident and even unethical due to intrusion into one's private life. Furthermore, unlike most previous work on death, this finding highlights how death anxiety has a surprisingly positive impact in organizations. The third finding is about the impact of self-esteem on LTO at work. As mentioned earlier self-esteem is an established correlate of death anxiety and generational categorization, however, the analysis of the correlation table did not raise any concern for the validity of the model. Further research is necessary to establish more precisely the direction of the causality link and more precise view of underlying mechanisms.

Fourthly, Gen Y-ers are more likely to have a lower LTO compared to Gen X-ers and Babyboomers. This hypothesis did receive only marginal support in our study, which encourages the consideration of more moderators and controls in future research. Gen Y-ers are known to have a lower work involvement compared to Gen X-ers and Babyboomers (Twenge, 2010). Having a lower work involvement can reduce the orientation to your present occupation whereby one is not focused on future prospects. Of course, there are still employees with individual LTO among Gen-Yers, as this study does not imply that Gen-Yers cannot demonstrate individual LTO. Special attention by managers and recruiters can be given to Gen-Yers to ensure that employees are aligned with the organizational time orientation. Awareness of the differences between generations concerning individual LTO at work may reduce intergenerational conflict at work.

The overall contribution of this study is to show important mechanisms driving individual LTO at work. Belief in afterlife, death anxiety, self-esteem and generational differences are drivers for individual LTO at work. The first two mechanisms, belief in afterlife and death anxiety are related to our mortality cognitions and therefore to time. Mortality cognitions are very personal and private elements. Human beings are not commonly discussing what they think about death. Organizational research rarely takes into consideration the effect which private elements can have on the attitude toward the organization. However, death concepts are central in our humanity, whereby death concepts are salient in our work environment. Therefore, the study results answer to the call for more research around mortality as a way to explain organizational life (Stein & Cropanzano, 2011) . On a side note, the control variable attendance to religious services had a highly significant effect which may suggest it as a possible avenue for future research on the impact of religious practice on work perception.

Limitations and future research

Although this study stresses important implications of belief in afterlife, death anxiety self-esteem and generational differences in relation to individual LTO at work, we should not overlook certain limitations.

This study operationalizes belief in afterlife without referring to a specific religion. This is done to assess the construct at individual level and avoid systemic association with belief held by a specific religious group. However, representations of the nature of afterlife may influence its impact on LTO. For instance, individuals picturing a purely immaterial afterlife may be prone to make a clear difference between current material life and the afterlife future. It could be argued that it would undermine the value of belief in afterlife as a predictor of LTO. This concern is partially limited by the fact that the results hold if the belief in afterlife scale includes an item asking respondents to which extent they believe they will be able to interact with the present world in their life after death.

Generational differences can be caused by age instead of generational differences as this is not a longitudinal study, but a cross-sectional study. However, this concern is limited by the existence of longitudinal work reporting the stability of attitude toward work for individual across their lifetime (Twenge, 2010). Previous academics have pointed out that generational differences might be small in size, and other factors might be of relevance to explain generational differences (Costanza, Badger, Fraser, Severt, & Gade, 2012; Macky et al., 2008a). While, Templer, Ruff, and Franks (1971) report that DA is not associated with age, Rasmussen and Brems (1996) report a moderate inverse relationship. Concerning the relation of BA with age, current studies report that BA is mostly a function of religion (Aday, 1985).

For practical reasons, death anxiety was measured by using an established instrument on death cognitions (Templer, 1970). However, some academic studies call for the use of a

multi-dimensional scale for death anxiety (Neimeyer & Moore, 1994). In this study, a multi-dimensional scale of death anxiety does not appear to exist. A factor analysis did not support the multi-dimensionality of death anxiety. Therefore, an improved operationalization of death anxiety could be recommended.

Because our dependent variable denotes a link between a focal organization and an employee, it could have been interesting to assess the centrality of work for the individual as a potential moderator in the relationships we explored in this study. Likewise, the degree of an individual's organizational identification, the status of the working organization and the qualities assigned to it may have a moderating influence on the link between LTO and our independent variables (Dutton, Dukerich, & Harquail, 1994).

Furthermore, this cross-sectional study focuses on individual elements that may vary over time. A longitudinal study may help to understand the dynamic of these elements over time. Additionally such a study would give stronger empirical evidence to the importance of generational differences in LTO.

Chapter 3⁴

Essay 2: A Glimpse of Eternity: Existential Concerns in the Management Team and Investment Decisions

INTRODUCTION

Much has been written about the uncertainty and the fast pace of economic change in today's business environment. By contrast, mankind and all animals are faced with at least two certain events: birth and death; however, it is likely that human beings differ from animals in that people are conscious of their finitude. Management research has made thorough inquiries related to beginnings and endings at the organizational level, notably in studies of entrepreneurship and firm survival. Surprisingly, only a few studies have investigated the influence of death inside organizations from a purely conceptual point of view (Grant & Wade-Benzoni, 2009; Stein & Cropanzano, 2011). Moreover, empirical studies in business settings are lacking. Even if it should be noted that discussion about the topic of death is judged inappropriate in many settings, the reluctance to investigate a topic of universal concern is probably an indication of a widespread anxiety before death. As Winston Churchill once said, "Any man who says he is not afraid of death is a liar" (Kopczuk & Slemrod, 2005).

Throughout human history, death is a pervasive topic in art and literature. From ancient Egyptian artwork to Tolstoy's *The Death of Ivan Ilyich* (Tolstoy, 1886) until more recent rock

⁴ Earlier version of this chapter have been nominated for the best PhD student paper at the annual Strategic Management Society conference in Washington 2009.

songs by the Doors, ample evidence exists of the importance of existential concerns across time and civilizations. During the last century, the existentialist philosophical movement best known through the works of Jean-Paul Sartre emerged based on the legacy of Kierkegaard and Nietzsche. To some extent the search for life's meaning attached to this philosophy is tied to the realization of inevitable mortality, which is the subject of considerable work in thanatology, that is to say: the multidisciplinary study of death and dying (Neimeyer & Van Brunt, 1995).

As stated by Slemrod (2003), "death is an integral part of life;" however, extant research in psychology shows that individuals and groups of individuals are trying to deny their own finitude. While a recent theoretical article investigates the antecedents and outcomes of death awareness at work at the individual level (Grant & Wade-Benzoni, 2009), our goal is to propose a theory linking existential concerns to managerial actions. This is not to say that the topic of executive death has never been studied. In fact some earlier work has explored the impact on organizational performance, issues of succession and turnover in the management teams (Bruce Johnson, Magee, Nagarajan, & Newman, 1985; Friedman & Singh, 1989; Worrell & Davidson, 1987; Worrell, Davidson, Chandy, & Garrison, 1986). These studies used the contexts of both large and small firms to assess the effect of death on firm performance and investor wealth. It is noteworthy that some studies have used death events as a unique opportunity to assess the value of the dead executives or scientists (Azoulay, Zivin, & Wang, 2008). To our knowledge, there is no available theory proposing to assess managerial actions in light of their existential symbolism. Investigating this issue could shed light on biases emerging in extreme situations of death events. Moreover, as our theory builds on social identity threat that is not limited to situations surrounding death events, we can learn on a great deal of biases arising from identity concerns among executives but also more generally in non-management settings.

On the one hand, there are theories explaining how the fear of death may influence behavior; on the other hand there are theories of management. Even if the psychological literature make some links between existential concerns and individual investment decision (Liu & Aaker, 2007), we propose a theory to explain how fear of death may influence managerial action and under which circumstances this influence is likely to be stronger.

The rest of this paper unfolds as follows. The next section starts with a broad review of the social identity literature; I then link this research with relevant streams of the existential psychology. A theory is developed to explain how, and to what extent, existential threat may influence the decision of executives in a situation characterized by high mortality salience.

A quantitative empirical study is conducted on a sample of 129 US public firms between 1988 and 2012. The results support our predictions. We found that our empirical findings establish the effect of the death of a top management team member on the time horizon of investments in the firm. This effect is moderated by the relative performance of the firm and by the level of identification between the deceased and the focal firm. We contribute the literature on Behavioral Strategy and develop our understanding on how death cognition influences strategic investment in public firms. Following the analysis we discuss the results and possible extensions.

THEORY AND HYPOTHESES

Consistent with previous modeling in Economics, we envision humans as rational but subject to the fear of death (Kopczuk & Slemrod, 2005). This fear may vary in intensity between individuals but is assumed to be universal (Becker, 1973; Moore & Williamson, 2003). Moreover, drawing upon cognitive theories we consider that this concern can be present at different levels of awareness (Wegner, 1994). This is in line with the vast literature establishing the impact of unconscious cognitive phenomena on individual decisions (Greenwald, 1992; Greenwald & Banaji, 1995; Kihlstrom, 1987). Consequently, a thought can influence one's cognition and actions without one realizing it (Wegner & Smart, 1997). It means that we don't make any specific assumption related to which extent decision makers are conscious of the elements described in the present study.

Identity in management

Over the course of the past century, the concept of identity has diffused over several fields of inquiry. At first a major concern for philosophers (Heidegger, 1962; Sartre, 1948), it later became a very popular topic in psychology, social psychology, sociology and anthropology (Owens, 2006). At individual level, identity answers to the question: "Who am I?" For social psychologists "I" is considered in a broader sense as "We" in order to introduce the notion of identity related to groups of individuals.

Unsurprisingly, identity has started to generate some research in Economics and Management. Flowing from the seminal works on culture (Hofstede, 1980; Schein, 1970; Van Maanen & Schein, 1977), Ashforth and Mael (1989a) introduced the notion of social identity in the management literature. There is indeed a growing research agenda in management around the

concept of identity. Organizational theorists have recognized identity as a central feature of firms (Kogut & Zander, 1996), differing between organizations. Notably it sets an abstract but powerful boundary to activities of enterprises and create a sense a belongingness. (Santos & Eisenhardt, 2005). Our study explore the impact of the death of an individual (an executive) on the subsequent decision taken by a group of individuals he belonged to (the top management team). Therefore we need to shed light on the impact on surviving individual and the impact on the group of individuals itself. Firstly, we will expose how death cognitions will have impact at individual level, then secondly, how this individual impact may influence team decision.

INDIVIDUAL DEATH COGNITION

The nature of the self

Following the seminal work of Tajfel (1981) on intergroup relations, the social identity approach combines social identity theory (Tajfel, 1982) and self-categorization theory (Reicher, Spears, & Haslam, 2010; Turner, Oakes, Haslam, & McGarty, 1994). It stresses the social nature of the individual identity, and how people define themselves as members of a group. Psychology and social psychology consider individual identity and social identity as related notions. Stets and Burke (2000) argue that the general theory of the self and social identity theory have “more differences in emphasis than in kind”. The “groups” used in social psychology echo the “roles” of psychology. There are evidences that our definition of the self is largely influenced by our social context and that individual attitudes and behavior are closely linked to the way we see ourselves in categories or groups. Not only our identity is defined at the interface of our selves and the world but it also includes elements of the outside world. The inclusion of external elements as part of our identity is expressed in the concept of extended-self introduced by Belk (1988). In studying the psychological foundation of materialism, Belk stated that “knowingly or unknowingly, intentionally or unintentionally, we regard our possessions as parts of ourselves” (Belk, 1988). Initially, the notion of extended self was defined as potentially including objects, places, persons and group possessions. It was later extended to include identification with the working organization (Tian & Belk, 2005). This later refinement of the concept is largely supported by the literature on organizational identification; it underlines the relevance of the concept for management research in that it could be applied to assets owned by organizations.

Identity threats: “To be or not to be...”

Self-affirmation theory posits that “people are motivated to maintain the integrity of the self” (Sherman & Cohen, 2006). Following this, they assess events and information potentially threatening their self-integrity from their own point of view or from the point of view of others. The notion of integrity depends on what is perceived appropriate for the culture, group, individual or situation. According to the self-affirmation theory (Pronin, Steele, & Ross, 2004), a perceived threat will prompt a defensive behavior in order to maintain the integrity of the self (Hart, 2014).

Every day is bringing its share of threats to the self, such as poor performance, rejection, illness, etc. However, among the numerous potential threats, death represents the ultimate threat against self-identity because not only it questions the continuity of the self in time and space but it also jeopardizes the possibility of future preservative actions; “to be or not to be...”

Individual faced with a situation of mortality salience experience existential anxiety.

Terror Management Theory

As noted by Sherman & Cohen (2006), Terror Management Theory (TeMT) makes a direct link between mortality salience and social identity. Indeed, TeMT affirms that the maintenance of self-identity helps to boost self-esteem which acts as a buffer to the existential terror stemming from the realization of our own mortality (Solomon, Greenberg, & Pyszczynski, 1991). Around this idea, a fruitful thread of existential psychology produced numerous empirical studies (Florette Cohen, 2004). TeMT states that humans have devised strategies to cope with the fear of death. These defensive strategies are an outcome of self-

preservation instinct, a “...superordinate goal toward which all behavior is oriented”, survival is then organized around three aspects: biological, symbolic and self-expansive (Greenberg et al., 1997).

Moreover, trying to shed light on the psychological motivation behind social identity, Hogg and colleagues have proposed and tested that group identification is also motivated by desire to reduce uncertainty (Grant & Hogg, 2011; Hogg & Terry, 2000; Hogg et al., 1995). Therefore, asserting social identity can result in an increase in self-esteem but it also a way to affirm continuity and therefore to reduce uncertainty. While the goal of this paper is about assessing the impact of threat on identity on decision made by firms, our framework is coherent with both uncertainty reduction and self enhancement views of the motivation behind group identification.

Identity defense mechanism

In a very influential book Becker (1973) stressed the universality of existential concern and proposed a few ways in which individuals deny the reality of their own finitude. Building on this work some researchers proposed theoretical models and tested the underpinnings and moderators of death anxiety (Neimeyer & Van Brunt, 1995; Tomer & Eliason, 1996). Tomer and Eliason proposed that death anxiety is directly determined by concern about the meaningfulness of death, regrets about past actions and future impossibilities. This anxiety is provoked by the discrepancy between the future possible self and the future desired self. In other words, individuals aim at maintaining the continuity of their identity and capacity of action in a future that is threatened under mortality salience condition. The documented

reluctance of retiring executive to give away positions of power is an anecdotal evidence of such a behavior (Sonnenfeld, 1988).

Consistent with the premise of a universal anxiety before death, several psychologists explain the need of healthy individuals for a legacy, leading to a strong desire for the creation and preservation of an eternal identity (Lifton, 1973; Lifton, 1976, 1979).

The notion of symbolic life introduced by Lifton is closely related to the concept of the extended-self developed by Belk (Ahuvia, 2005; Belk, 1988; Noble & Walker, 1997; Tian & Belk, 2005). In essence, while Lifton stressed the existence of a life beyond the body, Berk concept of the extended-self made it possible to understand how the symbolic life could be influenced by our interactions in space and time. In a concrete way, Lifton (1973) affirms that human beings have “a compelling universal urge to maintain an inner sense of continuous symbolic relationship, over time and space, with the various elements of life” while Belk states that “the notion of the extended self suggests that we transcend the immediate confines of our bodies by incorporating into our identities, objects from our physical environment” (Belk, 1990).

Strategy for symbolic immortality

Various social psychologists have proposed and tested that extension of the self in space and time is a psychological viable answer to the fear of death. As we attach objects of the external world to the definition of our identity, we assert our identity across barriers of space and time, ultimately answering to a deep need of stability and self-preservation (Castano, 2004; Castano & Dechesne, 2005; Castano et al., 2006; Castano et al., 2002).

As existential philosophers considered that actions reveal the true nature of individuals, similarly humans may look for symbolic immortality by engaging in creative acts (Vigilant &

Williamson, 2003). These creations may be “visible testaments to one’s existence in the form of works of art or science, impressive buildings or monuments, amassing great fortunes or vast properties, and having children” (Florette Cohen, 2004). All of these acts reflect the urging desire to focus one’s energy into tangible artifacts that will eventually survive their initiator.

FROM INDIVIDUAL COGNITION TO TEAM DECISIONS

Identity, organizations and top management

We spend more than a third of our awoken time at work. Consequently, work represents a major element of our life in practical but also in psychological terms. A vast literature stresses the link between work situational factors and psychological states. Work satisfaction represents for example a significant part of perceived quality of life (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). This preponderance of work in our life posits work as a key element of our identity. Our work asserts our position in society, determines our group membership and constitutes an important source of meaning, all of which are building blocks of our social identity. Consequently, we argue that on one hand events at work have significant impact on our psychological well-being, but on the other hand work setting is a major avenue to express our internal state. Group membership influences the perception of norms of behavior which is reinforced by actions in conformity with group expectations. Therefore an interactionist view of identity stresses the mutual interaction between the identity manifested by the group and the individual (Burke, 1980; Mead, 1934). As Sartre

stated it (1948), people define their essence in their actions in that “man first of all exists, encounters himself, surges up in the world -and defines himself afterwards”. This promotes the importance of analyzing decisions within the realm of the individual in order to gain insight into psychological state.

Since the introduction of bounded rationality in economic theory, business researchers have studied the influences of biases and personal traits in decision makers (Chatterjee & Hambrick, 2007). The “Upper Echelon Theory” has demonstrated the concept of managerial discretion in many ways. Managerial discretion is defined as “latitude of managerial action” (Hambrick & Finkelstein, 1987; Hambrick & Mason, 1984), it encompasses both substantive and symbolic domains.

As individuals and as a group of individuals, members of a firm’s top management team have power and discretion to make decisions. These decisions may be driven by the interest of shareholders, demonstrate a self-serving bias (Chatterjee & Hambrick, 2007) or even be subject to one of the many bias attached to human decisions (Tversky & Kahneman, 1974). Management decisions are an example of the close relation between definitions of the individual self and the social self. Indeed, these decisions express our state of mind both to the external world but also to ourselves (Bodner & Prelec, 2003). To summarize, we argue that work is an important element of identity; in particular, studies have shown that higher occupational status are associated with higher work centrality. Therefore studying manager is even more relevant in this context (Harpaz & Fu, 2002; Mannheim, 1993; Mannheim, Baruch, & Tal, 1997; Sharabi & Harpaz, 2010). Actions and identity mutually influence each other; managers enact their identity in their decisions. Therefore, executives impress the desired image to the organization with their actions (Scott & Lane, 2000).

There is a vast literature on groupthink, initiated by the seminal contribution of Janis (1972) in political science and later transposed to the context of top management teams in firms (Peterson, Owens, Tetlock, Fan, & Martorana, 1998). Together with the researches of Whyte (1993) and Kerr, MacCoun, and Kramer (1996) these studies report that group and individual decisions are subject to the same biases. We have exposed earlier how cues of mortality may provoke a defense behavior at individual-level. Considering the top management team as a group of individuals, it appears that they are all subject to the effect represented by the loss of a team member to the possible exception of the executive that is replacing the deceased. Therefore, the vast majority of the team shares the threat on the identity of the group that emerged from the death a colleague. We argue that the threat prompts a group defense mechanism of cohesion that is likely to favor decision shared by the majority. Indeed several studies report a tendency of teams to become more cohesive when placed under threat shared by the individual members of the group (Gladstein & Reilly, 1985; Navarrete, Kurzban, Fessler, & Kirkpatrick, 2004; Staw, Sandelands, & Dutton, 1981; Turner & Pratkanis, 1998). Consequently, we propose that top management team decisions will be consistent with the defensive answer that we exposed at individual level.

The specificity of buildings and capital expenditures

The common denominator between a variety of thinkers pertaining to the existential school of thought is the exploration about “how we humans relate to the physical and metaphysical world that surrounds us, and how we can find meaning given the realities of life and death” (Florette Cohen, 2004). Buildings and to a lesser extent durable tangible assets representing capital expenditures have the characteristic of physicality and durability. As extension of our self, they increase our dimensionality in both space and time. The marketing literature has examples of comparable behavior. In particular the work of Urien exposes how some products such as having a tree planted after one owns death are catering the desire for symbolic life extension (Urien, 2003, 2007). Moreover, while being immobile for the most part, they are central to the activity developed to the firms because organizational life more or less happens in or around them. Therefore they offer a definite opportunity to transcend the feared limitation of human existential finitude as a “glimpse of eternity” or more modestly a way to inscribe one’s identity in an active, stable and desirable active future. Corporate buildings are physical evidences of social institutions that have the characteristic to be relatively stable in space and over time. The durability of architectural work is in sharp contrast with human beings (Gieryn, 2002). This is pictured in the propensity of political leaders to inaugurate libraries and buildings that will be standing extension of their identity; it is an example of the specific nature and symbolic value of buildings. Therefore we propose that decision makers may answer to social identity threat by investing “in forms of life and work that will outlive the self” (Kotre, 1984), which we call a “symbolic immortality strategy”. At the level of a firm this will be evidenced by a surge in investments in tangible durable assets.

We do not however assume that individuals live in a constant fear of death, influencing all of their actions. We think some events, such as the death of a team member make death very salient to all members. Therefore, in a context where life and death is made salient to all team

members we hypothesize that decision makers will engage in strategies to extend their own symbolic existence; ultimately favoring investment in durable tangible assets.

This impact will be short-lived because death denial will take over as time usually helps people to cope with grief (Kübler-Ross, 1973). Additionally, research in economics have demonstrated the ephemerality of emotional effects (Loewenstein, 2003). The duration of the effect is an empirical question that we will explore in the statistical analysis as we have no specific prior whatsoever. Therefore we lay the following hypothesis:

Hypothesis 1: The death of a top management team member will prompt a surge in symbolic immortality strategy.

Desirability of social identity link

Until now, we have discussed the impact of the ultimate threat to identity, which is death, on the decisions made by top managers. Let's assess in which situation this effect is likely to be amplified or reduced. In the light of social identity theory, there are potentially several moderating factors. These factors rely on the strength of the social identity bond between the deceased and the organization, the strength of the bond between the surviving management team and the organization and finally the desirability of being identified with the organization as a group. The strength of the identity link, and therefore its effect on decision following the death of a member of the group depends on some characteristic of the top management team, some characteristics of the deceased executive, and some element of the focal organization considered in its environment.

Following the need for stability of identity in situation of death salience, we hypothesized that top management will increase investments in capital expenditures as vehicles of group identity continuation. However, this requires that the identification with the organization would be desirable. Given that executives in an industry are likely to derive the status of their organization by comparison of its performance with firms of the same industry, the relative performance of the firm is likely to influence the magnitude of identity continuation strategies. In other words, depending on the status of the firm, surviving top managers may retreat from being associated with low status organization (Dutton et al., 1994; Ellemers, 1993; Scott & Lane, 2000). Therefore we hypothesize that the relative performance status of the firm works as a moderator of the relationship between mortality salience and investment decisions within the “upper echelon of the firm”.

Hypothesis 2: The effect of mortality salience on symbolic immortality strategy is positively moderated by high relative performance of the firm.

Strength of social identity bond

Groups are characterized by a level of cohesiveness. Social identity research stresses that the strength of identity defense reactions depends on the cohesiveness within the group and the permeability of its borders. As such, the top management team of a firm is could be considered as a very impermeable group. Managers in large firms are competing in “management tournaments” to attain the holy grail of executive positions after many years of hard fight (O'Reilly III, Main, & Crystal, 1988). Moreover, the strong selection mechanism is reinforced by a tendency toward homogeneity. In most situations groups and potentially new

entrants will mutually select one another on the premises of expected homogeneity in order to increase cohesiveness and reduce future conflicts (Boone, Van Olffen, Van Witteloostuijn, & De Brabander, 2004).

In our theoretical framework, the firm is a “common ground” (Clark, 1996) between top decision makers enabling the emergence of a common shared identity. Both old and recent trends in the social identity literature stress the fact that group identity is reinforced by affinity and closeness (Aron & Aron, 1986; Grant & Wade-Benzoni, 2009).

On one hand, these groups have erected huge barrier to entry but on the other hand some researchers have witnessed large differences between industries in terms of mobility rate of executives (Loewenstein & Issacharoff, 1994). In turn, high mobility rates may reduce the cohesion and therefore the amplitude of the social identity bond. Even though selection processes in place may have a strong impact on the creation of strong social identities within firm, bonds are developed and amplified through social interaction. Social interaction requires opportunities and time for exchange and discovery. Because bonds are two-way streets, we expect the symbolic immortality strategy taken by the group to be impacted by both the time spent by the passed away executive within the team and the average tenure time of the survivors.

Hypothesis 3: The effect of death salience on symbolic immortality strategy is positively moderated by the level of identification between the top management team and the deceased.

METHODS

Sources

We gathered death announcements of top management team members through COMPUSTAT Executive Compensation database. We restricted our search to US public firms quoted in the New York Stock Exchange or NASDAQ because we wanted to be sure that we could acquire additional variables. Moreover, because public firms are under the scrutiny of the stock markets, this would generate a context interesting to study. Indeed, in this setting, any mechanism of investment decisions that is not purely based on the logic of shareholder wealth increase is of interest for principals. Additional data at the firm level were taken from COMPUSTAT. The sample comprises 129 firms; we built an unbalanced panel dataset using available yearly firm –level data from annual reports. The final dataset contains 2404year-firmsobservations from 1988 to 2012 representing 40 industries (determined by SIC codes).In order to avoid left censorship, we collected death events which happened between 1992 and 2009.

Variables

The dependent variable for this study is the yearly capital expenditure (CAPEX) of the firm. Capital expenditures are relevant because they are expected to have effect on the long-run, they represent investments in low liquidity assets such as equipment and buildings and they frequently represent consequent amounts at firm level. Because of this durability, recent literature in strategy supports the use of capital expenditures as a sign of long-term orientation in firms (Souder & Shaver, 2010), this is the measure we use for symbolic immortality strategy.

Explanatory variables

In order to build a clock relative to the timing of the focal event, fifteen dummy variables were constructed to denote the year of the fatal loss (EV0) in the top management team, the following seven years (EV1, EV2, EV3, EV4, EV5, EV6, EV7) and the seven years preceding the focal event (EVM1, EVM2, EVM3, EVM4, EVM5, EVM6, EVM7). The relative performance of each firm compared to its industry is tracked by constructing a dummy variable equal to 1 if the firm performance in terms of Return On Sales, is lower than the median of the industry (IFLOWMED). Performance is acknowledged in previous research as a key determinant of status (Podolny & Phillips, 1996). The transformation of this variable in a dummy based on the median of the industry is coherent with the fact that the theoretical argument is about a social comparison with peers. In other words what counts is if the firm is above or under the performance of its peers allowing executive to position their organization in the top or the bottom of the performance distribution. The construct of level of identification between the focal firm and the deceased exposed in Hypothesis 3 is measured by a dummy variable (TENURE) equal to one if the total tenure of the deceased in the focal firm was above the sample average and equal to 0 otherwise. We want to establish that there is a phenomenon following an event, to do so we created a clock relative to the focal event. This mean that in any case, the tenure would be a constant for each firm as it relates to the tenure at the moment of death of the executive. As explained further, because of the nature of the model, the moderations will be tested by splitting the samples using IFLOWMED and TENURE variables. This means that transforming both these variables in dummies doesn't represent a waste of data.

Control variables

The trespass of an executive in a public firm will always lead to his replacement within the team in short or medium term. Therefore, one possible explanation of the results may also be an effect of newly appointed executive. Especially, there could be a tendency from newly appointed executive to take decision in order to assert their authority. This counterargument is particularly strong if the deceased had a possible strong influence on investment decisions. To this extent we created dummy variables controlling for the death of the CEO or Chairman (respectively CEO and CHRM), in order to empirically exclude this alternate explanation. None of these controls turned significant.

We included a measure of performance in the model. Indeed, it is possible that availability of cash from current operations may influence the propensity of engaging in investments. Control variables are the performance of the focal firm in the given year measured by EBITDA and the size of the firm. EBITDA was preferred to Free cash flow because it doesn't take into accounts Capital Expenditure (our dependent variable). Therefore we potentially limit correlation issues in the model. For the later we use the natural logarithm of the number of employees because the distribution of the original variable was positively skewed. Additionally, the possibility of an industry effect is controlled with the use of 1 letter SIC codes dummies (SIC1).

Table 1–Descriptive statistics

	Mean	SD	Min	Max
Capital Expenditure (CAPEX)	251.32	555.87	0	6976
Number of employees ('000)	16.51	37.55	.056	465
Firm Performance (EBITDA in '000)	905.51	3369.96	-9007	78021

Table 2 - Correlation matrix

	1	2	3	4	5	6	7
1- Capital Expenditure (CAPEX)							
2- 4 years after the event	.05*						
3- Firm size (Ln number of employees)	.47***	.04					
4- Deceased was CEO	.03	.00	.11***				
5- Deceased was Chairman	.10***	.00	.14***	.70***			
6- Firm Performance (EBITDA)	.35***	.00	.29***	-.07***	-.06**		
7- Relative performance under industry median	-.10***	.03	-.07***	-.07***	-.08***	-.12***	
8- Tenure of the deceased over average	.03	.00	.07***	.00	.04*	-.04	-.01

***p<.001, **p <.01, *p<.05

Consistent with the panel structure of the data and Hausman test results (Greene, 1997), we used a random effect regression model with a generalized least squares estimator for all models. Hypothesis 1 was tested using the full sample and a GLS model using binary clock indicators (Laporte & Windmeijer, 2005; López, 2009). Given the nature of the model with year counters variables, hypothesis 2 and 3 were tested using split samples in order to avoid building models with 15 interactions. We follow Venkatraman (1989) which suggests the use

of subgroups analysis to analyze effects of strategies across contexts. Furthermore Salomon and Jin (2008) propose subsample splits based on the median or mean of the moderating variable as valid alternative to interaction effects commonly used to assess contingency effects.

Results

Descriptive statistics are reported in Table 1 as well as in a correlation table (Table 2), which does not show any particular concern of high correlation pattern between variables, except for a high correlation between the control dummies for CEO and Chairman (0.7). In order to deal with the issue, we ran a model excluding the CEO variable and a separate model excluding the chairman variable (CHRM), the result did not change in a significant way, and the R^2 dropped from less than a percent in both alternative models. Likewise the maximum VIF is 2.07 which is well within the range of acceptable values. In order to control for a potential effect of specific years in the date range (1992 -2009), we added year dummies. This analysis is not reported here because the results did not differ from the base analysis and no specific year was ever significant in the models. The quantitative analysis fully supports hypothesis 1 (See table 3). There is a highly significant impact of the occurrence of a death among members of the management team on their propensity to invest in durable assets. This effect significance appears gradually from year 2 to year 5, peaking at year 4 after the event in both significance and coefficient ($\beta=119.21178^{***}$), then disappears after year 5 which is conform to the hypothesis. This is very consistent with the time frame of capital expenditure projects. For example, even with it has suffered from a delayed start, the project of Apple campus 2 is predicted to take about 3 years to which we should add study time (Khan, 2015). The results

of the split samples regressions relating to the test of hypothesis 2 confirm the hypothesis (see table 3). Likewise the split sample models testing for hypothesis 3 support our claim that the level of identification between the firm and the deceased positively moderates our main effect (hypothesis 1).

In all models, the control variables of performance and firm size are consistently significant, indeed bigger firms and firms with better current financial results do invest more in capital expenditures. Conversely, the controls for CEO or Chairman trespass did not turn significant at any point, confirming that we are not dealing here with the impact of a new decision maker but indeed with an effect of the death of a top management team member. None of the year dummy and industry controls was significant which allows us to exclude a temporal pattern and an industry effect.

Table 3 – Test of Hypotheses

Dependent variable Capital Expenditures (CAPEX)– Random-Effects GLS unbalanced panel regressions

Independent variables	Hypothesis 1 – Main effect		Hypothesis 2 – Moderation of firm relative performance		Hypothesis 3 – Moderation of tenure of the deceased	
			Sample split: Performance of the firm this year under the median of the industry	Sample split: Performance of the firm this year over the median of the industry	Sample split: Tenure of the deceased in the firm under average	Sample split: Tenure of the deceased in the firm over average
	Model 1***	Model 2a***	Model2b***	Model 3a***	Model 3b***	
Year counters						
Year of event	26.89523	-17.21482	12.2123	16.85705	70.0512	
1 Year after the event	25.96007	6.302844	28.30523	.9764377	120.8033*	
2 Years after the event	56.36493	9.631968	85.0963*	16.86505	180.3195**	
3 Years after the event	93.41695**	-6.407672	141.5025**	28.86462	234.6233***	
4 Years after the event	119.2117***	26.27503	162.8658***	48.74395	264.4741***	
5 Years after the event	58.46552	-36.5918	96.80363**	-3.661856	183.8473**	
6 Years after the event	1.695952	36.85279	3.084278	-10.47268	-14.30138	
7 Years after the event	29.88584	16.08786	6.054773	23.94785	15.03319	
1 Year before the event	2.957303	-31.7351	-3.759528	-6.96018	59.41844	
2 Years before the event	-11.84773	-36.27865	-9.80361	-20.43032	68.40049	
3 Years before the event	-20.45629	-47.65059	-19.39102	-34.52508	70.96522	
4 Years before the event	-27.97419	-38.69693	-16.24308	-33.50064	43.19662	
5 Years before the event	-21.12721	-61.07903	-11.79306	-17.90386	27.10314	
6 Years before the event	-16.03311	-7.513597	-22.28781	-7.991622	34.47423	
7 Years before the event	-16.75647	-14.73185	-21.68193	-21.04796	22.59126	
Control variable						
Firm size (ln of number of	102.8123***	34.45352**	144.663***	95.21702***	48.84671**	
CEO (If the deceased was the CEO)	-62.55671	51.13427	-72.87074	84.60017	-41.17192	
CHRM (If the deceased was the	111.9203	23.12239	111.487	-19.87803	171.231	
Performance (EBITDA)	.03536***	.1848411***	.0469377***	.025804***	.2867749***	
Constant	-10.59871	43.38335	-77.6646	20.12546	-139.2898	
R ²	0.3090	0.5454	0.3227	0.3156	0.6065	
N	2404	808	1608	1729	687	
Year Dummies	Tested					
Industry dummies	Tested					

***p<.001, **p<.01, *p<.05

DISCUSSION

Faced with a death among them, managers reacted by showing a preference for investment which potentially have a longer imprint over time onto the organization. In ancient Egypt, Pharaohs would dedicate a lot of energy to build their tombs and assure that some evident artifact would outlive them. A few thousand years later we still contemplate the pyramids and associate them with the memory of these ancient kings. Executives have, of course, a different nature, but they do have some discretionary power to mark the landscape with modern monuments and can decide on the focus of investments.

We proposed and showed that the death salience effect will disappear in subsequent years. Maybe, the pace of life at the top serves as a killer of existential concerns that would be too difficult to maintain for the long-term. Elizabeth Kübler-Ross mentioned this unattributed quote, “We cannot look at the sun all the time, we cannot face death all the time” (Kübler-Ross, 1973). While our study may be a bit provocative, it is not so surprising that executives dedicating huge amounts of efforts to win the successive management tournaments leading to the top management team would first identify with the organization and secondly be influenced in a subtle way in their investment decisions. Nature teaches us that the instinct of physical survival is extremely strong in animals and humans; this study underlines the effect of the quest for symbolic survival that we called symbolic immortality. We proposed social identity in the form of identification with the focal firm as a basic mechanism to explain our main effect. Consequently the fact that the effect is moderated by the performance standing of firms within their industry makes a lot of sense as identities are evidently less desirable if associated with lower status. Moreover, as the effect is stronger in cases when the deceased executive had an over average tenure in the organization, we can confirm that the identification bond of managers with firms gets stronger over time.

We controlled for the cases of death of CEO or Chairman in order to rule out the alternative explanation that we were measuring the effect of replacing CEO or Chairman. The empirical analysis confirmed that the effect is not significantly influenced by these specific cases. It stresses that we are indeed witnessing the effect of death and not the effect of the replacement of an executive. At this point there is no clue whether a top management team is differently influenced by the death of the powerful or simply the colleague. This may be a point in the debate concerning the universality of death denial (Kellehear, 1984) and a reminder of the equality of all human beings before death.

This research paper opens the way for several possible extensions. First, it would be interesting to include more moderators at the level of the structure of the board and to distinguish family firms from others. Then, this study supports the idea that investments and decision have more than a purely financial rationale, but may be influenced by events attached to the human nature of the management team. From a theoretical point it implies that investments have dimensions that are need to be investigated further. In particular we propose to investigate the importance of the spatial and temporal dimension of assets. Such studies may be interesting in contexts when the temporal horizon may be limited such as before retirement of executives. Following this it would be worthwhile to investigate how the choices of investments made at individual level may be also influenced by such existential concerns. Finally, this study investigates a specific and extreme case of time horizon issue within organizations; it aims to make a contribution to the developing body of research in behavioral strategy. In particular it develop the arguments on the time-horizon of firm investments with theories of social psychology (Souder & Bromiley, 2012; Souder & Shaver, 2010). It support the idea that social identity can be used to explain strategic decisions in business organizations (Ashforth & Mael, 1989b; Santos & Eisenhardt, 2005). It undermines the view of management decisions as purely rational and stresses how management could be driven by deep

psychological issues at individual and group level. This study gives an example that managerial discretion may be used for goals other than the direct financial interests of the managers.

Obviously this research is not exempt from limitations. The nature of the methodology doesn't allow a detailed description of the mechanisms in action. Moreover, we couldn't theorize on the duration of the effect itself. This stands as an important area to improve in future projects.

Lastly it would be naïve to consider that all death are coming as a surprise, consequently the extent to which the top management team could prepare itself to the trespass of one of its member may greatly influence the nature and timing of their reaction.

“Eternity is really long, especially near the end.” Woody Allen (1975)

Chapter 4⁵

Essay 3: The shift to process thinking: How Quality Management can influence outsourcing propensity

INTRODUCTION

The phenomenon of outsourcing has gained considerable momentum in the past three decades, to date; researchers are explaining this trend by the combined forces of technology and globalization (Contractor, Kumar, Kundu, & Pedersen, 2010; Whittington, 1991; Whittington, Pettigrew, Simon, Fenton, & Conyon, 1999).

The decision to undertake activities through market or hierarchy is by nature a decision about the boundary of the firm. To this extent it is as much an economical decision as a decision about the identity of the organization. Santos and Eisenhardt point out that boundary decisions that are based on boundaries of identity are unique in the sense that they may be partly unconscious (Santos & Eisenhardt, 2005). Likewise we propose in this research a mechanism leading to boundary decisions. This mechanism involves a change in the conceptual understanding of the firm, namely, the process thinking. Considering the firm as a set of process as opposed to a set of functions establishes elements that influence outsourcing propensity. We don't assume that firms deliberately change their conceptual understanding in order to take outsourcing decisions but we explain how this change is a central feature of the quality management initiatives. Therefore this is a byproduct of quality management that is not consciously expected by organizations. It is an attempt to tie a change in conceptual thinking and therefore cognitions about the organization to choices in terms of activities. The

⁵ This chapter is the result of joint work with Elena Golovko.

choice of outsourcing is one way to delimit the boundaries of the firm, what we refer in this thesis as the space of the firm. Consequently, this work proposes some theoretical explanations and an empirical study on how a cognitive change influences what is perceived to be the space of the firm as evidenced through outsourcing decisions.

The main theoretical streams explaining outsourcing decisions, namely transaction costs economics, the resource based view of the firm. However, we must acknowledge the possibility that the current trend of growing outsourcing is partially influenced by organizational isomorphism (DiMaggio & Powell, 1983; Gibson & Tesone, 2001). While proponents of each stream have been involved in epic academic jousts, claiming that each theory will be the exclusive explanation, it seems that there are enough theoretical and empirical arguments to support both theoretical streams as valid and complementary explanations of the outsourcing decision (Poppo & Zenger, 1998; Santos & Eisenhardt, 2005).

While the theoretical base to explain outsourcing decisions seems to be stabilized at this point, statistics in developed economies are reporting a constant growth in the propensity of firms to disintegrate (Zenger & Hesterly, 1997). Firm disintegration includes the increase of hybrid governance forms and the use of outsourcing.

This study focuses on the relationship between quality management and outsourcing propensity. Outsourcing represents a market transaction as defined by Williamson (Williamson, 1983). Given this, on a broad sense, evolutions in the overall propensity to engage in such transaction have to be tied to evolutions on the supply side, evolution on the demand side (the focal firm) or some elements of the market itself. First, on the supply side, the opening of many economies to international competition lead to the emergence of national advantages tied to specialization well explained by Adam Smith and David Ricardo. Secondly, we may explain the increase in outsourcing by changes in the demand side and

more specifically changes at industry and firm levels. Some previous work on organizational modularity and the emergence of loosely coupled forms of organization stresses on the importance of industry standards. According to Schilling and Steensma (2001), industry standards reduce the differences between industry players, which leads to a notable reduction of asset specificity and ultimately to disintegrated value chains. At firm-level, the main established argument to explain growth of outsourcing is the impact of information technologies. It is now widely accepted that new techniques such as Computer Assisted Design, create interfaces to improve coordination with external suppliers (Argyres, 1999). In a nutshell Argyres argues that the use of IT systems enabled the establishment of a technical grammar that led to the lowering of cost associated with outsourcing. Moreover, the codification necessary to design information systems serves as a basis for communication and transfer to and from external vendors.

This paper aims at introducing and testing quality management initiative as an important antecedent to outsourcing. We lay out theory explaining how quality management represents a paradigm shift in the conceptual understanding of the nature of the firm. We then explain how such shift can have an effect on the decision to outsource business processes. We include information technology and internationalization as major environmental trends that are likely to influence outsourcing decisions and relate them to the proposed theory. We test our predictions on the panel of Spanish manufacturing firms over the period of 1990-2008. The empirical findings provide a general support for our theory.

Our study contributes to the organizational theory research on the governance of economic activity by proposing a new perspective on firm level changes leading to outsourcing. It is a first step toward bridging the academic literature on the theory of the firm with current business practices.

The remainder of the paper is structured as follows. First, we expose the theory on the effect of quality management on the decision to outsource. We then describe the sample and methods. Next, we present the results of our empirical analyses. Conclusions and discussion follow.

THEORY AND HYPOTHESES

Background: quality and firm organization

The initial steps of modern quality management systems could be traced back to 1920's with statistical methods used to control the quality of industrial production. However, Quality Management (QM) as common business practice has grown mainly from the 1980's. Because the trend emerged and diffused initially through consulting work, QM research has long been limited to very specialized academic journals. It is after a long latency period that a few articles appeared in academic management literature trying to catch up with what was at the time a quickly diffusing practice (Anderson, Rungtusanatham, & Schroeder, 1994; Gartner & Naughton, 1988; Powell, 1995). Extant research has focused on the impact of QM on performance, issues of implementation and the reasons for adopting QM in organizations. Concerning performance effects, there is a vast literature linking QM to different aspects of performance in both profit and non-profit organizations (Powell, 1995). The main outcome of such a literature is that not all firms are positioned to benefit equally from the adoption of QM. Following this, a strand of research developed trying to outline "best practices" in implementation of quality initiatives (Olivier, 2011). Finally, a number of authors have

questioned the reasons for QM adoption in organizations; they exposed the importance of legitimization as a motive as well as requirements imposed in buyer – supplier relationships (Graffin & Ward, 2010; Zbaracki, 1998).

Surprisingly, researchers have been silent on the impact of QM on the conceptual understanding of the firm and its relation to outsourcing propensity. While there are a number of variant standards and branches in QM, we do not base our argument on the specificity of a particular standard or philosophy. To do so, we base our reasoning on what appears to us as a central feature common to all established quality management systems, that is, the “process approach”. The importance of “processes” as a central tenet of QM is evidenced from earlier theoretical analyses. Indeed, according to Hackman and Wageman (1995), the first principle of total quality management is “to focus on work processes. The quality of products and services depends most of all on the processes by which they are designed and produced. It is not sufficient to provide clear direction about hoped-for outcomes; in addition, management must train and coach employees to assess, analyze, and improve work processes”. This point is corroborated by other sources such as the ISO 9000 standards (International Standard Organization, 2005), the research of Anderson et al. (1994) (see also (Powell, 1995), (Benner & Tushman, 2002) and (Benner & Tushman, 2003)).

The quality literature defines processes as follows:

“A process is a set of activities that are interrelated or that interact with one another. Processes use resources to transform inputs into outputs. Processes are interconnected because the output from one process becomes the input for another process. In effect, processes are “glued” together by means of such input output relationships.” (International Standard Organization, 2005).

Consequently, firms investing in QM will assess and analyze the whole firm or a subpart of the firm as a “set of processes” linked together by input output relationships. It will lead to the creation of a descriptive process map, identifying the processes involved concerned with an internal nomenclature. We argue that the “process approach” defined above constitute a major shift in the understanding of the firm by managers. It means processes are added as a new dimension to the existing terminology of functions and business units. Indeed, writing about processes Daft and Lewin (1993) state: “In the old paradigm, managers attempted to manage tangible items such as boxes on the organization chart, people, and facilities” as testimony of the departure from a divisional or functional understanding of the firm.

Quality and outsourcing

There are two elements in the “process approach” that are facilitating the transition to outsourcing. Firstly, given that processes are mapped with inputs and outputs, interdependencies in the workflow are revealed. Following this, process mapping acts as a “revelator” of organizational modularity increasing the probability that whole processes or activities will be considered as candidate for outsourcing. Secondly, once outputs of each activity are identified, it paves the way for external comparison with potential vendors (Zenger & Hesterly, 1997), especially because of the need to assess the output of process. Moreover, as we explained earlier QM entails the generation or at least formalization of a terminology of processes and activities. By definition, processes or activities are actions; we propose that a nomenclature of activities or processes is more likely to match available propositions of outsourcing present in the environment than any nomenclature of firm subparts based on functions, countries, products or product lines. In essence this is an

argument about granularity of information available for decision-making. Based on analytical thinking, the process mapping inherent to QM breaks down existing categories of operational units and processes into smaller conceptual processes or tasks. Doing so, it creates a fine-grained description of processes and activities. In turn this will enable for finer comparisons between the state of performance of internal processes and the offers proposed on the market for outsourcing. This makes it possible for organizations to discern potential improvements arising from outsourcing.

It is here worthwhile to mention the concept of sensemaking introduced by Weick (1995) in organization theory, which has led to an increased interest in the influence of language on organizations.

According to its proponents sensemaking involves turning circumstances “into a situation that is comprehended explicitly in words and that serves as a springboard to action” (Taylor & Van Every, 2000). It is clear that language is a central tenet on managerial cognition exerting a considerable influence on decision-making within firms. As stated by Green Jr (2004) : “Previous research has shown that managers are essentially discursive beings, spending two-third to three-fourth of their time engages in verbal activity (Mintzberg, 1973). Managers use this constant verbal activity to gather information, develop shared understanding of the world, and persuade individuals to contribute to collective purposes, such as the adoption and implementation of new practices. Managers hear and use all kinds of arguments to elicit action and describe the world”. Moreover, in economics, the importance of language on firm organization is stressed by the contributions of Arrow (1974) as well as Cremer, Garicano, and Prat (2007), arguing that firms develop internal codes of languages to facilitate internal coordination and that these internal codes create a barrier for the coordination of activities undertaken outside of the focal firm.

Consequently, the labels generated in the process mapping enable the firm to bridge the internal organization with the environment so that internal activities are now defined and measured in a “process” vocabulary. Because processes are the subject of outsourcing offers, the generation of the process terminology induces a reduction of asset specificity for the processes or activities analyzed in QM initiatives leading to a higher propensity for outsourcing. We are here making the point that boundedly rational managers rely on language and vocabulary to assess asset specificity. As anecdotal evidence easily verifiable by all we can mention how important is the nature of selected words in order to find relevant matches in internet search engines or any kind of database. Nowadays, words are not only a support for meaning but also the key to unlock links with potential business partners using modern search technologies. In essence we argue that identification, codification and measure of processes provide the elements to compare internal performance with external opportunities of outsourcing. As a matter of example, as most pharmaceutical firms used to consider the whole R&D as the core of their competitive advantage, it is now observed that most players are aggressively outsourcing the process of clinical trials as a subpart of the whole R&D effort (Contractor et al., 2010).

Hypothesis 1: Firms involved in Quality Initiatives have a higher propensity to outsource.

Quality management and information technology

There is a tradition of research establishing the direct impact of Information Technology (IT) investments on the propensity of outsourcing (Brynjolfsson, Malone, Gurbaxani, & Kambil, 1994). Through case studies and large sample quantitative studies it appeared that IT reduces

the cost of both external and internal coordination. By reducing the cost of buyer –supplier coordination, IT allows to replace large vertically integrated firms by a network of suppliers connected by information systems (Argyres, 1999; Brynjolfsson & Hitt, 2000; Malone, Yates, & Benjamin, 1987). Shared information systems represent a cost efficient channel for coordination of distinct organizations participating to a common project. Moreover, because IT facilitates environment scanning for outsourcing opportunity it reduces the cost of search for outsourcing supplier (Bakos, 1997; Boudreau, Loch, Robey, & Straud, 1998).

In the above literature, IT is established as a factor leading to firm disintegration. Further studies investigate the contingencies in such a relationship, notably Sahaym, Steensma, and Schilling (2007) propose an industry level analysis of the influence of industry change and industry standards. They use the propensity of alliance formation and use of contingent workers as dependent variables denoting the use of loosely coupled organizational forms. For Jacobides (2005) information standardization and coordination simplification are necessary condition of firm disintegration. We propose that increased information capability together with processes labels generated by quality initiatives will lay the foundation for increased outsourcing propensity because the focal firms will possess both the necessary conceptual understanding enabling them to compare the state of internal processes with external opportunities and the tools to facilitate the coordination with external parties. Moreover, as reported by Zenger and Hesterly (1997), IT systems are the basis for recent innovations in performance measurement systems. Using IT systems, firms are able to measure more precisely input and outputs of processes. In turn, this better measurement leads to a fine understanding of performance that makes it possible explore and compare internal performance with opportunities of outsourcing. Therefore, in addition to the existing literature, we expect a positive moderating effect of IT investments on the relationship between QM and outsourcing.

If both elements have a separate impact on the codification of knowledge (Cohendet & Steinmueller, 2000), they should not be assumed identical. Therefore, we take note of the direct effect of IT on outsourcing previously exposed while the relative importance of each factor is an empirical question that will be dealt with in this study. Without any theoretical prior, we will explore this issue empirically.

Hypothesis 2: IT investments positively moderate the relation between QM and outsourcing.

Quality management and internationalization

It would be fair to say that firms operating in an era of intense international economic exchanges have relatively more options for sourcing because they can extend the breadth of their search from their nearby environment to very distant countries. The current status of China as the “factory of the world” is a clear example that many firms did grasp the possibilities of accessing distant sources of efficiency. Offshore outsourcing represents a significant share of outsourcing because of the huge potential savings enabled by sharp international differences in labor costs, even for very qualified workers. Lewin, Massini, and Peeters (2009) suggest that in the specific case of R&D offshoring, the shortage of talents in developed economies may even be a more important factor in the decision to source internationally. Given the availability of such international opportunities, we propose that firms with international knowledge and international business networks are better positioned to engage into offshore outsourcing and subsequently find adequate partners using their international social network.

As in any process of learning, experience helps to remove barriers. A large chunk of the international business literature emphasizes the psychological barriers firms have to overpass

in order to become active internationally (Aharoni, 1966; Johanson & Vahlne, 1977, 2009). The work of Johanson and Vahlne (2009) lays down a model of incremental commitment to foreign market. They observed the following steps in the process of firm internationalization:

1) No regular export; 2) Export through agent; 3) Sales subsidiary; 4) Production/manufacturing.

Initially restricted to internalized activities, the model of Johanson and Vahlne has been extended to include international activities in business networks (Johanson & Vahlne, 2009). As evidenced by these four steps, firms are getting more involved into foreign markets as they accumulate experience. Among the different forms of experience, knowledge about the institutional setting of a country is very broad in scope and can be applied to any business relationship taking place in the same country (Eriksson et al., 1997). The model places knowledge about foreign markets at the center of the decision to engage in foreign activities.

On a social level, firms active internationally are developing a wide-spread network of contacts like buyers, business partners or suppliers. We propose that businesses that have developed a “process approach” through QM initiatives will be more likely to identify opportunity of improvement of internal activities if they have access to knowledge about foreign opportunities using their established network of relationships and knowledge about foreign environment (Nahapiet, & Ghoshal 1998). Moreover, the existing network of the firm helps to reduce the search costs for market transactions (Farrell, 2005).

We argue here that firm internationalization serves as a moderator in the relation between QM and outsourcing because on one hand, the fine-grained information on processes gained from the use of QM is the basis that allows decision-maker to discern opportunities of improvements as we previously explained. On the other hand, firms with international activities are more likely to have the experience and network that will enable them not only to

discern but also to engage in opportunities of outsourcing offered by the international business environment. Therefore we argue that QM serves as a basis for outsourcing that is even more likely whenever the firm is able to compare and make use of international differences in term of resources, capabilities and costs.

Finally, internationalization of the firm may have a minor mechanical impact on outsourcing as a reducing number of countries are forcing foreign suppliers to offset their sales to local customers with specified amounts of purchases from local suppliers. (Bozarth, Handfield, & Das, 1998).

Hypothesis 3: Firm internationalization positively moderates the relation between quality management and outsourcing.

DATA AND METHODS

R&D outsourcing

Our theoretical arguments do not rest on the nature of the activity that is outsourced. However, we test our hypotheses on the relationship between quality management and outsourcing using a particular type of a firm's activity – R&D investment. Well established arguments are stressing the need to maintain a tight control on innovation capabilities because they constitute the core of competitive advantage (Barney, 1991; Grant, 1996; Lewin et al., 2009). Therefore, we test our theory in a conservative empirical context. Because innovation represents a core element of competitive advantage, investments in R&D get a lot of attention from capital markets and firm management. Lewin, Massini, and Peeters (2011), report that

the organization of the R&D process is at the core of an efficient R&D. To this extent organizations across industries are going away from a simple view of R&D as a black box, toward a sustained effort of improving R&D productivity as exposed in professional literature (Barnhart, 2012; Gassmann, 2006; Miller, 1995).

The sample

The data we use in this study come from a survey of Spanish manufacturing firms during 1990–2008. The project was conducted by Fundación Empresa Pública with financial support from the Spanish Ministry of Science and Technology. The survey is administered to the population of Spanish manufacturing firms with 200 or more employees, and to a stratified sample of small and medium firms, representative of the population of manufacturing firms with more than 10 but fewer than 200 employees. The sample intends to maintain the representativeness of the manufacturing sector over time. Every year new firms are included in the sample from the population of new firms. Firms that exited the original sample during the sampling period are replaced by firms with similar characteristics drawn from the population.

The initial sample is an unbalanced panel with 2188 firms in 1990 and 4629 firms in 2008 coming from twenty distinct industries, which leads to 61576 firm-year observations in total. Some variables were included in the questionnaire once in four years, i.e. for years 1990, 1994, 1998, 2000 and 2006. For this reason and due to missing values the final sample is reduced to 8409 firm-year observations and includes 5 years of panel: 1990, 1994, 1998, 2000 and 2006.

The ESEE (“Encuesta Sobre Estrategias Empresariales” or “Survey of Business Strategies”) dataset provides an appropriate setting to test the relationship between QM and R&D

investment that we aim to examine. First, the data allow tracing the firms and their decisions to invest in QM and R&D over a time span of 19 years which allows exploring the dynamic path of firms' behavior. Second, the sample contains detailed information on the firms' innovation behavior and R&D activities with the distinction between internal and external R&D investment and displays substantial variation across firms and over time. Furthermore, each year firms have to report whether they performed IT investments. Thus, our sample is well-suited for examining the proposed relationships. Previous research has used the same data set as it is representative for the Spanish manufacturing industry over this period (Golovko & Valentini, 2011; Salomon & Jin, 2008; Salomon & Shaver, 2005).

Variables

The dependent variable, external R&D investment (*External R&D*), is measured as logarithm of spending on R&D done externally. The independent variables include quality management initiatives⁶, investment in information technologies, and international exposure of a firm. In the ESEE questionnaire firms were asked if they introduced *quality management* systems. We use a dummy variable *QM* which equals 1 if a firm had implemented in year *t*, and 0 otherwise. *IT investment* is measured in the following way. We use a dummy variable which equals 1 if a firm reported investments in equipment for information processing in year *t*, and 0 otherwise.⁷ We measure international exposure of a firm as a dummy variable *Internationalization* which takes value 1 if a firm trades in the foreign markets (either export or foreign direct investment) and 0 if a firm is purely domestic during the period of 1990-2008. The definition of variables is presented in appendix 2.

⁶Quality management initiatives include quality control and normalization investments according to the questions formulated by ESEE questionnaire (See definition in appendix 2).

⁷The ESEE questionnaire uses the following definition of IT investment (account 227): the IT equipment including computer software and hardware, and in particular for the data processing, operating systems, applications for the database management and any other computer hardware and software.

We also use a number of relevant controls in order to exclude alternative explanations of the level of R&D in firms. Firms' size (*Size*) measured as the logarithm of sales stands as an important control variable that may affect the amount invested in R&D. Larger firms may have access to more resources to invest in R&D. We use the logarithm as the initial sales variable was positively skewed. Next, we control for the diversification level by including the number of products a firm has in year t . Firms that are more diversified have more need for R&D and then may be more likely to outsource. Further, following previous research on outsourcing, we control for transaction cost arguments using product commoditization (Larsen, Manning, & Pedersen, 2013). Commoditization leads to standardization of processes (Davenport, 2005), which in turn reduces asset specificity and multiply potential suppliers. We use a dummy variable which equals 1 if firm's products are standardized (i.e., they are mostly the same for all buyers), and 0 otherwise. We use the percentage of foreign capital in the ownership of the firm to control for the differences in R&D propensity between foreign owned and local firms. Finally, we include the vectors of year and industry dummies to control for the industry heterogeneity and macroeconomic conditions common to all firms.

Figures 1 and 2 show the evolution of R&D outsourcing in our sample during the time frame of our study. We observe a steady increase in the phenomenon comparable to what is observed in the US market (Lewin et al, 2009). Table 1 presents summary statistics and product moment correlations for the variables.

Figure 1. Proportion of firms with external R&D over 1990-2008

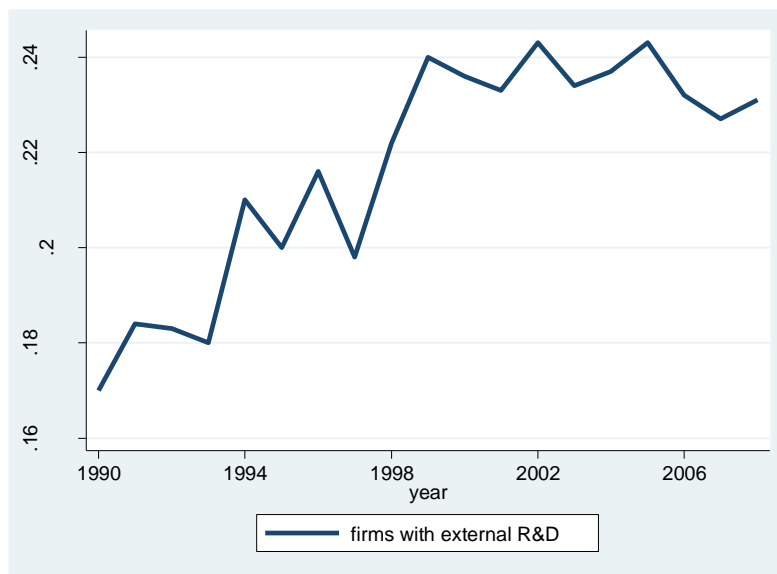


Figure 2. Percentage of external R&D investment in total R&D investment.

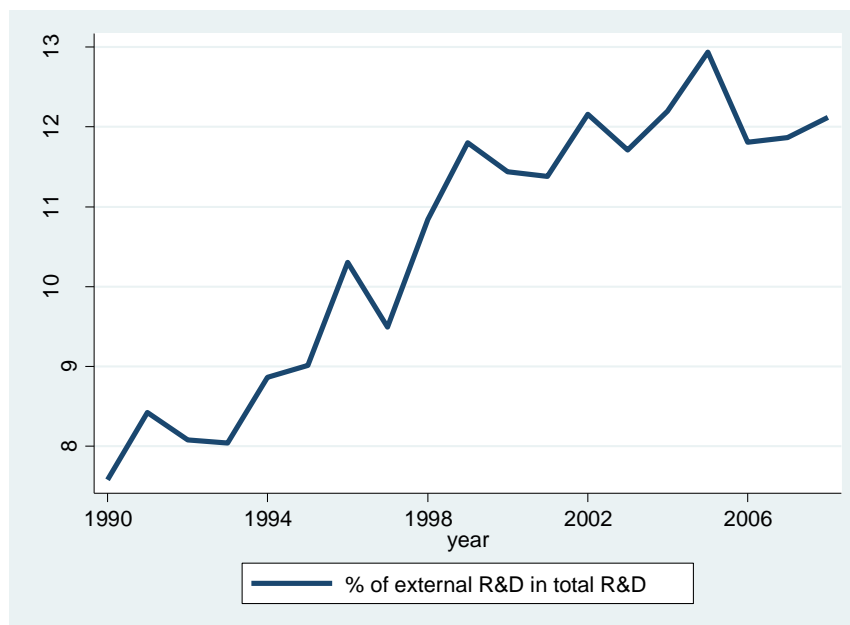


Table 1. Descriptive statistics and product moment correlations.

	1	2	3	4	5	6	7	8
1.External R&D	1							
2. <i>QM</i> , (0/1)	0.34	1						
3. IT Investment, (0/1)	0.29	0.24	1					
4. Internationalization (0/1)	0.30	0.25	0.28	1				
5. Size (log of sales)	0.57	0.38	0.40	0.45	1			
6. Foreign capital	0.31	0.22	0.23	0.28	0.48	1		
7. Diversification (number of products)	0.07	0.08	0.06	0.09	0.10	0.02	1	
8. Commoditization, (0/1)	0.01	0.00	0.00	0.03	0.09	0.02	-0.02	1
Mean	2.93	0.42	0.53	0.74	15.74	17.49	1.16	0.62
Standard deviation	5.14	0.49	0.49	0.43	2.05	36.38	0.49	0.48
Min	0	0	0	0	8.69	0	1	0
Max	19.45	1	1	1	22.75	100	7	1

Generally, the correlations are as expected. With respect to the dependent and main independent variables, *QM*, *IT investment* and *Internationalization* indicators show positive and significant correlation with R&D outsourcing ($r=0.34$, $p<0.001$, $r=0.29$, $p<0.001$, and $r=0.30$, $p<0.001$ respectively). Firm size is positively and significantly correlated with *External R&D*; moreover, firms with foreign capital participation are likely to do more external R&D, as well as more diversified firms. Commoditization is not significantly correlated with external R&D investments. The mean VIF is 4.65 which is well within the acceptable range to exclude issues of multicollinearity.

Statistical approach

To properly estimate the model we need to account for the possible endogeneity of our dependent and independent variables, as we might observe a positive association between them which is potentially spurious. For instance, firms might invest in both R&D and information technologies/quality management initiatives as they grow, therefore firm's organizational growth might be the underlying driver for both decisions. This argument suggests that firms that choose to invest in R&D (and in particular, outsource R&D) are not a random sample and are likely to invest in IT and quality management as well. This might result in a positive bias on the coefficient estimate of the effect of IT and *QM* on external R&D investment. We follow several steps to deal with this problem. We take advantage of the panel structure of our data and use fixed effects model that controls for unobserved firm heterogeneity. We also lag our dependent variable with one year.

To test Hypotheses 2 and 3 we use two interaction terms ($QM*ITinvestment$; $QM*Internationalization$), which we expect to be positive and significant consistent with the positive moderating effect of IT investment and Internationalization on the relationship between QM initiatives and R&D outsourcing.

Results

The results of the fixed effects model are reported in the following table (Models 1-5).

Table 2. Fixed effects model. Dependent variable: External R&D investment

	Hypotheses (predicted effects)	Model 1 (baseline)	Model 2	Model 3	Model 4	Model 5
Size (log of sales)		0.74*** (0.13)	0.73*** (0.13)	0.72*** (0.13)	0.72*** (0.13)	0.72*** (0.13)
Foreign capital		0.29 (0.40)	0.28 (0.40)	0.28 (0.40)	0.27 (0.40)	0.27 (0.41)
Diversification		0.06 (0.13)	0.06 (0.13)	0.07 (0.13)	0.06 (0.13)	0.06 (0.13)
Commoditization		-0.20 (0.17)	-0.19 (0.17)	-0.20 (0.17)	-0.20 (.17)	-0.20 (0.17)
QM	H1(+)		0.39*** (0.12)	0.37*** (0.12)	0.35*** (0.11)	0.34*** (0.11)
Investment in informatics				0.08 (0.11)	0.07 (0.10)	0.08 (0.11)
Internationalization				0.28 (0.39)	0.35 (0.38)	0.33 (0.39)
QM*ITinvestment	H2(+)			0.16 (0.21)		0.11 (0.21)
QM*Internationalization	H3(+)				0.39** (0.20)	0.35* (0.20)
Intercept		-8.48*** (2.08)	-8.48*** (2.08)	-8.53*** (2.11)	-8.55*** (2.10)	-8.55*** (2.10)
Time dummies		Included	Included	Included	Included	Included
N of obs		7428	7428	7397	7397	7397

*, **, *** are significantly different from zero at the 10%, 5% or 1% level respectively. Standard errors are robust.

Model 1 is the baseline model with control variables. Firm size has a positive and significant effect ($p < 0.01$) on R&D, consistent with the argument that larger firms have more resources

to invest in R&D, and in external R&D in particular. The diversification dummy is positive as expected, but only marginally significant ($p < 0.10$). The coefficient of *Commoditization* shows the expected sign (negative), but is statistically insignificant, whereas firms with foreign capital participation make higher R&D investments externally, although the coefficient of foreign capital is not statistically significant.

Model 2 adds the *QM* variable to test *Hypothesis 1*. In line with the hypothesized effect of *QM* initiatives on R&D outsourcing, the coefficient of the *QM* dummy variable is positive and statistically significant at 1% significance level. In such a way, the investment in quality management initiatives has a positive and significant effect on external R&D spending, therefore supporting *Hypothesis 1*.

To test *Hypotheses 2* and *3*, we use two interaction terms, *QM*ITinvestment* and *QM*Internationalization*. Models 3-5 list the results of the estimations. The results of Model 3 show that the coefficient of *QM*ITinvestment* is positive but not statistically significant. Therefore, although the direction of the moderating effect of IT investment is consistent with *Hypothesis 2*, we do not find empirical support for *H2*.

Models 4 and 5 add the interaction term *QM*Internationalization*. The results show that firms that implement *quality management* initiatives and have access to international markets have higher external R&D investment, i.e. outsource more R&D. The coefficient of *QM*Internationalization* is positive and significant ($p < 0.05$). Thus, we do find support for *Hypothesis 3*. The positive moderating effect of international exposure is also present in Model 5, thus showing robustness across different specifications. Moreover, the coefficients of prior IT investment and internationalization as shown by Model 5, are positive, however not statistically significant. Thus, the results point to the prevalence of the direct impact of quality management activities on external R&D.

DISCUSSION AND CONCLUSION

In this study, we developed theoretical arguments pointing at the effect of quality management initiatives on outsourcing. While the focus on processes did not go unnoticed in previous literature this is to our knowledge the first study that links the conceptual change implied by the quality movement to further decision about make versus buy. We argue that quality management leads firms to “assess, analyze, and improve work processes” (International Standard Organization, 2005). In turn, firms are then able to compare the performance of internal processes with opportunities of outsourcing available in the environment. We include previous drivers of outsourcing as complementary explanation of the phenomenon. More precisely, we use IT investments and firm internationalization as an integral part of our theory. Our empirical analysis uses a large sample of firms covering 18 years in a conservative setting. Such sample is particularly relevant to test the proposed relationships because it allows tracking the phenomenon of outsourcing over a long period of time on firms that are very diverse in size and industries. Moreover, the quality management movement spreads over a considerable time period therefore the structure of our data is particularly suited for our investigation. The empirical results confirm our main hypotheses. In our empirical study, quality management had a significant impact on R&D outsourcing, while the well-established IT investment wasn’t significant. This calls for a reassessment of the link between IT investment and outsourcing.

Even though our findings provide support for the central idea of the paper they should still be carefully interpreted because of some limitations that may warrant attention. In particular, nowadays firms are outsourcing huge variety of processes. Our research only looks at R&D outsourcing. As we previously stated, this is providing us with a conservative setting, however, it also limits the extension of the empirical results to other types of outsourcing.

Also, we have to acknowledge that we rely on data from a single country, and therefore we cannot assess the effect of differences in institutional, financial and governance regimes.

Our study contributes to the organizational theory literature in several ways. It investigates the deep conceptual transformation toward firm's understanding as a set of processes rather than functions, departments, products, or areas, which results from the quality movement. In doing so, we link two of the most important changes that happened in the business landscape during the past three decades, namely outsourcing and quality. In our study, these trends are explained at the firm-level rather than country or industry. In a more general way, this study shows how the understanding of the boundaries of the firm or what we call the space of the firm could be influenced by a change in the nature of the information available to decision-makers. Quality Management and the process mapping attached to it are the tools through which the granularity of information on processes and activities is increased. Consequently, this opens the way for decisions about the limits of the firm and a change in the space of the firm.

Since its inception the bulk of research dealing with quality has been focused on practical issues of implementation with academic research lagging well behind. We take a step away and consider more theoretical implications.

Nowadays managers extensively rely on processes while the theory of the firm still predominantly makes use of other concepts such as contracts, resources, knowledge. The literature begins to evolve as some works are now considering the parallel between routines and processes (Lillrank, 2003; Pentland, 1999). Our work intends to narrow the gap between academic research and business practice. As for managers, our results suggest that investments in quality management and international exposure are complementary in transforming integrated value chains into networks of research collaboration.

There are several avenues for future research suggested by our study. It can be interesting to extend the empirical testing on other countries, and other types of outsourcing. In particular, a more fine grained view of outsourcing location differentiating outsourcing from offshore outsourcing may help to better understand the contingencies.

Chapter 5

General Conclusion

In this chapter, we will summarize our main contributions, mention the limitations of our inquiries and propose avenues for future extensions.

Main contributions

At first, time appears as a very concrete one-dimensional concept. As we have stressed in the introductory chapter, such a physical dimension is also appreciated subjectively. The three empirical essays composing this thesis are investigating a few possible sources of influence in the cognition of time space within organizations. Then our essays proceeded to explore the impact of these cognitions on the link between employees and the organization and some strategic decisions taken by organizations. In chapter 2, we show that the extent to which employees are projecting themselves in a future within the organization as a symbolic space is influenced by their fear of death, belief in afterlife and the generation to which they belong. This contributes to stress the importance of rather unexplored individual factors in the perception of time in relation to the organization considered as a symbolic space. In the next chapter, we explored how a death within the top management team can extend the time horizon of decision makers as expressed in investments. Both chapters 2 and 3 use the concept of death in a central way. Death is the ultimate time reference at the scale of human beings, so it is not surprising that cognition related to it have impact on time cognitions. This work shows some originality as to some rare exceptions death related cognitions are not a popular subject of investigation in management research even if it is clearly a central theme in life in general and in the arts in particular. The symbolic immortality strategy that we exposed

is the result of the extension of top management team time-horizon's following the trespass of a colleague. The last empirical chapter dwelled on the cognition of organizations borders. We proposed and tested that the shift to process thinking inherent to quality management influences the cognition of organizational boundaries and increased the propensity to outsource some activities. The effect of quality management on the granularity of process-level information available to decision-makers enable them to better compare the performance of internal processes with opportunities of outsourcing and consequently increased the propensity to outsource. This means that the space of the firm as expressed in its boundaries is affected by a cognitive change resulting from quality management initiatives.

To the exception of chapter 2, each essay measured an organizational action as an outcome. However, even if the first empirical essay doesn't measure any organizational outcome, the individual concept of long-term orientation at work has important impact on the workplace. Therefore, our three empirical works belong clearly to the emerging field of behavioral strategy. This is confirmed by the use of social psychology and psychology as central theoretical lenses. By contrast, this work does depart from the "contextualist" paradigm of behavioral strategy because it makes use of hypothetico-deductive quantitative methods to study phenomena that are often investigated with qualitative methods. Altogether, this thesis is another piece to undermine the understanding of a purely rational decision-maker. We evidenced the influence on beliefs and personal fear on employee's relationship with the workplace. We show that the instinct of survival does not only apply to our bodies but does extend to our symbolic selves and furthermore leads to concrete decisions within firms. Finally, we propose that the use of a management philosophy modifies the conceptual understanding of the firm and partially determines its boundaries.

Overall this dissertation represents an effort toward more understanding of the perception of time and space within organization at individual and group level. It proposes and tests

empirically a number of neglected determinants of these perceptions in order to explain cognitions and decisions within firms.

Limitations and future research

This work is not exempt from limitations. In particular, the first empirical essay is based on a cross-sectional survey while our central concept is individual long-term orientation at work. It would have been stronger to use a panel, in order to assess the evolutions over time.

The second essay makes use of quantitative methods to support the existence of a symbolic immortality or at least a symbolic life extension strategy. While it is useful as a first endeavor, it doesn't allow rendering the richness of the mechanisms at work. Moreover, we suggest the influence of tangibility and physical durability of assets in investment decisions but are unable to quantify how this could play a role or constitute a bias in decision-making. This is a potential area for further developments for both finance and management scholars. Does the nature of assets transcend their financial characteristics when it comes to investment decisions?

In our last empirical essay, we linked quality management initiative to an increase of propensity to outsource. However, we tested this proposition on a specific type of outsourcing, namely R&D outsourcing. It should be beneficial to further research and theorize on the impact of quality management on the propensity to outsource other types of activities. Moreover, it would be valuable to explore further how the characteristics of information on internal performance may influence the course of organizational strategies.

This work represents a theoretical contribution supported by quantitative empirical studies. It is a first step toward an individual research agenda. This is a first personal endeavor into the study of behavioral influences on cognitions and actions of organizations; each empirical

essay is based on a different dataset which open the door for future extensions. Additionally, the study of time and space cognitions may benefit immensely from the future use of laboratory experiment that will allow a precise measurement of hypothesized influences in a controlled environment. In particular, such experimental methods make it possible to prime subjects in many ways and therefore uncover the many ways in which cognitions of space and time can be influenced.

REFERENCES

- Abrams, D., & Hogg, M. A. 1988. Comments on the motivational status of self-esteem in social identity and intergroup discrimination. *European Journal of Social Psychology*, 18(4): 317-334.
- Aday, R. H. 1985. Belief in Afterlife and Death Anxiety: Correlates and Comparisons. *OMEGA - Journal of Death and Dying*, 15(1): 67-75.
- Aharoni, Y. 1966. The foreign investment decision process. *Cambridge, Mass.*
- Ahuvia, Aaron C. 2005. Beyond the Extended Self: Loved Objects and Consumers' Identity Narratives. *Journal of Consumer Research*, 32(1): 171-184.
- Allen, W. 1975. *Death: A Comedy in One Act*: S. French.
- Anderson, J. C., Rungtusanatham, M., & Schroeder, R. G. 1994. A theory of quality management underlying the Deming management method. *Academy of Management Review*, 19(3): 472-509.
- Angeline, T. 2011. Managing generational diversity at the workplace: expectations and perceptions of different generations of employees. *African Journal of Business Management*, 5(2): 249-255.
- Antia, M., Pantzalis, C., & Park, J. C. 2010. CEO decision horizon and firm performance: An empirical investigation. *Journal of Corporate Finance*, 16(3): 288-301.
- Argyres, N. S. 1999. The Impact of Information Technology on Coordination: Evidence from the B-2 "Stealth" Bomber. *Organization Science*, 10(2): 162-180.
- Aron, A., & Aron, E. N. 1986. *Love and the expansion of self: Understanding attraction and satisfaction*: Hemisphere Publishing Corp/Harper & Row Publishers.
- Arrow, K. J. 1974. *The limits of organization*. New York.
- Ashforth, B. E., & Mael, F. 1989a. Social identity theory and the organization. *Academy of management review*: 20-39.
- Ashforth, B. E., & Mael, F. 1989b. Social identity theory and the organization. *Academy of management review*, 14(1): 20-39.

- Azoulay, P., Zivin, J. S. G., & Wang, J. 2008. *Superstar extinction*.
- Bakker, A. B., Tims, M., & Derks, D. 2012. Proactive personality and job performance: The role of job crafting and work engagement. *human relations*, 65(10): 1359-1378.
- Bakos, J. Y. 1997. Reducing buyer search costs: Implications for electronic marketplaces. *Management science*: 1676-1692.
- Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of management*, 17(1): 99-120.
- Barnhart, T. M. 2012. *Creating a Lean R&D System: Lean Principles and Approaches for Pharmaceutical and Research-Based Organizations*: CRC Press.
- Bearden, W. O., Money, R. B., & Nevins, J. L. 2006. A Measure of Long-Term Orientation: Development and Validation. *Journal of the Academy of Marketing Science*, 34(3): 456-467.
- Becker, E. 1973. *The Denial of Death*: New York: Free Press.
- Belk, R. W. 1988. Possessions and the Extended Self. *Journal of Consumer Research*, 15(2): 139-168.
- Belk, R. W. 1990. The role of possessions in constructing and maintaining a sense of past. *Advances in consumer research*, 17(1): 669-676.
- Benner, M. J., & Tushman, M. 2002. Process Management and Technological Innovation: A Longitudinal Study of the Photography and Paint Industries. *Administrative Science Quarterly*, 47(4): 676-706.
- Benner, M. J., & Tushman, M. L. 2003. Exploitation, Exploration, and Process Management: The Productivity Dilemma Revisited. *The Academy of Management Review*, 28(2): 238-256.
- Bodner, R., & Prelec, D. 2003. The diagnostic value of actions in a self-signaling model. *The Psychology of Economic Decisions*, 1.
- Boone, C., Van Olfen, W., Van Witteloostuijn, A., & De Brabander, B. 2004. The genesis of top management team diversity: Selective turnover among top management teams in Dutch newspaper publishing, 1970-94. *Academy of Management Journal*: 633-656.

- Boudreau, M. C., Loch, K. D., Robey, D., & Straud, D. 1998. Going global: Using information technology to advance the competitiveness of the virtual transnational organization. *Academy of Management Executive*: 120-128.
- Bozarth, C., Handfield, R., & Das, A. 1998. Stages of global sourcing strategy evolution: an exploratory study. *Journal of Operations Management*, 16(2-3): 241-255.
- Breakwell, G. M. 1986. *Coping with Threatened Identities. Vol. 904*: Methuen.
- Breakwell, G. M. 1993. Social representations and social identity. *Papers on social representations*, 2(3): 198-217.
- Bruce Johnson, W., Magee, R. P., Nagarajan, N. J., & Newman, H. A. 1985. An analysis of the stock price reaction to sudden executive deaths: Implications for the managerial labor market. *Journal of Accounting and Economics*, 7(1): 151-174.
- Brynjolfsson, E., & Hitt, L. M. 2000. Beyond Computation: Information Technology, Organizational Transformation and Business Performance. *The Journal of Economic Perspectives*, 14(4): 23-48.
- Brynjolfsson, E., Malone, T. W., Gurbaxani, V., & Kambil, A. 1994. Does Information Technology Lead to Smaller Firms? *Management Science*, 40(12): 1628-1644.
- Burke, P. J. 1980. The self: Measurement requirements from an interactionist perspective. *Social Psychology Quarterly*: 18-29.
- Castano, E. 2004. In case of death, cling to the ingroup. *European Journal of Social Psychology*, 34(4): 375-384.
- Castano, E., & Dechesne, M. 2005. On defeating death: Group reification and social identification as immortality strategies. *European review of social psychology*, 16(1): 221-255.
- Castano, E., Yzerbyt, V., Paladino, M. P., & Carnaghi, A. 2006. Extending the self in space and time: Social identification and existential concerns. *Social identities, edited by Brown, Rupert and Capozza, Dora, Psychology Press*.

- Castano, E., Yzerbyt, V., Paladino, M. P., & Sacchi, S. 2002. I belong, therefore, I exist: Ingroup identification, ingroup entitativity, and ingroup bias. *Personality and Social Psychology Bulletin*, 28(2): 135-143.
- Cennamo, L., & Gardner, D. 2008. Generational differences in work values, outcomes and person-organisation values fit. *Journal of Managerial Psychology*, 23(8): 891-906.
- Chang, S.-J., Van Witteloostuijn, A., & Eden, L. 2010. From the editors: Common method variance in international business research. *Journal of International Business Studies*, 41(2): 178-184.
- Chatterjee, A., & Hambrick, D. C. 2007. It's All About Me: Narcissistic CEOs and Their Effects on Company Strategy and Performance. *Administrative Science Quarterly*, 52(3): 351-386.
- Chow, C. W., Kato, Y., & Merchant, K. A. 1996. The use of organizational controls and their effects on data manipulation and management myopia: A Japan vs US comparison. *Accounting, Organizations and Society*, 21(2): 175-192.
- Clark, H. H. 1996. *Using Language*: Cambridge University Press.
- Cohendet, P., & Steinmueller, W. E. 2000. The codification of knowledge: a conceptual and empirical exploration. *Industrial and Corporate Change*, 9: 195-209.
- Contractor, F. J., Kumar, V., Kundu, S. K., & Pedersen, T. 2010. Reconceptualizing the Firm in a World of Outsourcing and Offshoring: The Organizational and Geographical Relocation of High-Value Company Functions. *Journal of Management Studies*, 47(8): 1417-1433.
- Costanza, D. P., Badger, J. M., Fraser, R. L., Severt, J. B., & Gade, P. A. 2012. Generational Differences in Work-Related Attitudes: A Meta-analysis. *Journal of Business and Psychology*: 1-20.
- Cremer, J., Garicano, L., & Prat, A. 2007. Language and the Theory of the Firm. *Quarterly Journal Of Economics*, 122(1): 373.
- Daft, R. L., & Lewin, A. Y. 1993. Where Are the Theories for the "New" Organizational Forms? An Editorial Essay. *Organization Science*, 4(4): i-vi.

- Das, T. K. 1987. Strategic planning and individual temporal orientation. *Strategic Management Journal*, 8(2): 203-209.
- Davenport, T. H. 2005. The coming commoditization of processes. *Harvard business review*, 83(6): 100-108.
- Dechow, P. M., & Sloan, R. G. 1991. Executive incentives and the horizon problem: An empirical investigation. *Journal of Accounting and Economics*, 14(1): 51-89.
- DiMaggio, P. J., & Powell, W. W. 1983. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2): 147-160.
- Dutton, J. E., Dukerich, J. M., & Harquail, C. V. 1994. Organizational images and member identification. *Administrative science quarterly*: 239-263.
- Ellemers, N. 1993. The influence of socio-structural variables on identity management strategies. *European review of social psychology*, 4(1): 27-57.
- Farrell, D. 2005. Offshoring: Value Creation through Economic Change. *Journal of Management Studies*, 42(3): 675-683.
- Fishbein, M., & Ajzen, I. 1975. *Belief, attitude, intention and behavior: An introduction to theory and research*.
- Florette Cohen, S. S. M. M. T. P. J. G. 2004. Fatal Attraction. *Psychological Science*, 15(12): 846-851.
- Frederick, S., Loewenstein, G., & O'donoghue, T. 2002. Time discounting and time preference: A critical review. *Journal of economic literature*, 40(2): 351-401.
- Friedman, S. D., & Singh, H. 1989. CEO succession and stockholder reaction: the influence of organizational context and event content. *Academy of Management Journal*, 32(4): 718-744.
- Gartner, W. B., & Naughton, M. J. 1988. The Deming theory of management. *Academy of Management Review*, 13(1): 138-142.
- Gassmann, O. 2006. Opening up the innovation process: towards an agenda. *R&D Management*, 36(3): 223-228.

- Gibson, J. W., & Tesone, D. V. 2001. Management fads: Emergence, evolution, and implications for managers. *The Academy of Management Executive*, 15(4): 122-133.
- Gieryn, T. F. 2002. What Buildings Do. *Theory and Society*, 31(1): 35-74.
- Gladstein, D. L., & Reilly, N. P. 1985. Group decision making under threat: The tycoon game. *Academy of Management Journal*, 28(3): 613-627.
- Golovko, E., & Valentini, G. 2011. Exploring the complementarity between innovation and export for SMEs' growth. *Journal of International Business Studies*, 42(3): 362-380.
- Graffin, S. D., & Ward, A. J. 2010. Certifications and Reputation: Determining the Standard of Desirability Amidst Uncertainty. *Organization Science*, 21(2): 331-346,588,590.
- Grant, A. M., & Wade-Benzoni, K. A. 2009. The Hot and Cool of Death Awareness at Work: Mortality Cues, and Self-Prospactive and Prosocial Motivation. *Academy of Management Review*, 34(4): 600-622.
- Grant, F., & Hogg, M. A. 2011. Self-uncertainty, social identity prominence and group identification. *Journal of Experimental Social Psychology*.
- Grant, R. M. 1996. Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17: 109-122.
- Greeley, A. M. 1996. *Religion as poetry*: Transaction Pub.
- Green Jr, S. E. 2004. A rhetorical theory of diffusion. *Academy of Management Review*: 653-669.
- Greenberg, J., Solomon, S., & Pyszczynski, T. 1997. Terror Management Theory of Self-Esteem and Cultural Worldviews: Empirical Assessments and Conceptual Refinements. In P. Z. Mark (Ed.), *Advances in Experimental Social Psychology*, Vol. Volume 29: 61-139: Academic Press.
- Greene, W. H. 1997. *Econometric Analysis*: Prentice Hall.
- Greenwald, A. G. 1992. New Look 3: Unconscious cognition reclaimed. *American Psychologist*, 47(6): 766.

- Greenwald, A. G., & Banaji, M. R. 1995. Implicit social cognition: attitudes, self-esteem, and stereotypes. *Psychological review*, 102(1): 4.
- Griepentrog, B. K., Harold, C. M., Holtz, B. C., Klimoski, R. J., & Marsh, S. M. 2012. Integrating social identity and the theory of planned behavior: Predicting withdrawal from an organizational recruitment process. *Personnel Psychology*, 65(4): 723-753.
- Gursoy, D., Maier, T. A., & Chi, C. G. 2008. Generational differences: An examination of work values and generational gaps in the hospitality workforce. *International Journal of Hospitality Management*, 27(3): 448-458.
- Hackman, J. R., & Wageman, R. 1995. Total quality management: Empirical, conceptual, and practical issues. *Administrative Science Quarterly*: 309-342.
- Hambrick, D. C., & Finkelstein, S. 1987. Managerial discretion: A bridge between polar views of organizational outcomes. *Research in Organizational Behavior*, 9: 369-406.
- Hambrick, D. C., & Mason, P. A. 1984. Upper echelons: The organization as a reflection of its top managers. *Academy of management review*, 9(2): 193-206.
- Harpaz, I., & Fu, X. 2002. The Structure of the Meaning of Work: A Relative Stability Amidst Change. *Human Relations*, 55(6): 639-667.
- Hart, J. 2014. Toward an Integrative Theory of Psychological Defense. *Perspectives on Psychological Science*, 9(1): 19-39.
- Heatherton, T. F., & Polivy, J. 1991. Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social psychology*, 60(6): 895.
- Heidegger, M. 1962. Being and Time.
- Hofstede, G. 1980. *Culture's consequences: International differences in work-related values*: Sage Publications, Incorporated.
- Hofstede, G., & Bond, M. H. 1988. The Confucius connection: From cultural roots to economic growth. *Organizational dynamics*, 16(4): 4-21.
- Hogg, M., & Terry, D. 2000. Social identity and self-categorization processes in organizational contexts. *Academy of Management Review*, 25: 121-140.

- Hogg, M. A., Terry, D. J., & White, K. M. 1995. A tale of two theories: A critical comparison of identity theory with social identity theory. *Social Psychology Quarterly*: 255-269.
- Hoyle, R. H. 1991. Evaluating measurement models in clinical research: Covariance structure analysis of latent variable models of self-conception. *Journal of Consulting and Clinical Psychology*, 59(1): 67.
- International Standard Organization. 2005. Quality management systems Fundamentals and vocabulary, *ISO 9000:2005*.
- Jacobides, M. G. 2005. Industry Change through Vertical Disintegration: How and Why Markets Emerged in Mortgage Banking. *The Academy of Management Journal*, 48(3): 465-498.
- Janis, I. L. 1972. Victims of groupthink: a psychological study of foreign-policy decisions and fiascos.
- Johanson, J., & Vahlne, J. E. 1977. The internationalization process of the firm-a model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*: 23-32.
- Johanson, J., & Vahlne, J. E. 2009. The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies*, 40(9): 1411-1431.
- Kellehear, A. 1984. Are we a 'death-denying' society? a sociological review. *Social Science & Medicine*, 18(9): 713-723.
- Kerr, N. L., MacCoun, R. J., & Kramer, G. P. 1996. Bias in judgment: Comparing individuals and groups. *Psychological review*, 103(4): 687.
- Khan, J. 2015. Apple Campus 2 Construction Progress Timeline: new photos, drone videos + updates on Cupertino's spaceship. 9to5.
- Kihlstrom, J. F. 1987. The cognitive unconscious. *Science*, 237(4821): 1445-1452.
- Kogut, B., & Zander, U. 1996. What firms do? Coordination, identity, and learning. *Organization Science*, 7(5): 502-518.

- Kopczuk, W., & Slemrod, J. 2005. Denial of Death and Economic Behavior. *Advances in Theoretical Economics*, 5(1): Article 5.
- Kotre, J. 1984. *Outliving the self: Generativity and the interpretation of lives*: Johns Hopkins University Press Baltimore.
- Kübler-Ross, E. 1973. *On Death And Dying*: Routledge.
- La Fontaine, J. 1668. Fables, Vol. Book 5.
- Laporte, A., & Windmeijer, F. 2005. Estimation of panel data models with binary indicators when treatment effects are not constant over time. *Economics Letters*, 88(3): 389-396.
- Larsen, M. M., Manning, S., & Pedersen, T. 2013. Uncovering the hidden costs of offshoring: The interplay of complexity, organizational design, and experience. *Strategic Management Journal*, 34(5): 533-552.
- Laverty, K. J. 1996. Economic "short-termism": The debate, the unresolved issues, and the implications for management practice and research. *Academy of Management Review*: 825-860.
- Laverty, K. J. 2004. Managerial myopia or systemic short-termism?: The importance of managerial systems in valuing the long term. *Management Decision*, 42(8): 949-962.
- Lewin, A. Y., Massini, S., & Peeters, C. 2009. Why are companies offshoring innovation? The emerging global race for talent. *Journal of International Business Studies*, 40(6): 901-925.
- Lewin, A. Y., Massini, S., & Peeters, C. 2011. Microfoundations of internal and external absorptive capacity routines. *Organization Science*, 22(1): 81-98.
- Lifton, R. J. 1973. The sense of immortality: On death and the continuity of life. *American Journal of Psychoanalysis*, 33(1): 3-15.
- Lifton, R. J. 1976. *The Life of the Self: Toward a New Psychology*: Simon & Schuster.
- Lifton, R. J. 1979. *The Broken Connection: On Death and the Continuity of Life*: American Psychiatric Pub, Inc.

- Lillrank, P. 2003. The Quality of Standard, Routine and Nonroutine Processes. *Organization Studies*, 24(2): 215-233.
- Liu, W., & Aaker, J. 2007. Do you look to the future or focus on today? The impact of life experience on intertemporal decisions. *Organizational Behavior and Human Decision Processes*, 102(2): 212-225.
- Loewenstein, G. 2003. *Time and decision: Economic and psychological perspectives on intertemporal choice*: Russell Sage Foundation Publications.
- Loewenstein, G., & Issacharoff, S. 1994. Source dependence in the valuation of objects. *Journal of Behavioral Decision Making*, 7(3): 157-168.
- López, R. A. 2009. Do Firms Increase Productivity in Order to Become Exporters?*. *Oxford Bulletin of Economics and Statistics*, 71(5): 621-642.
- Lovalló, D., & Sibony, O. 2010. The case for behavioral strategy. *McKinsey Quarterly*, 2: 30-43.
- Lundh, L. G., & Radon, V. 1998. Death anxiety as a function of belief in an afterlife. A comparison between a questionnaire measure and a Stroop measure of death anxiety. *Personality and Individual Differences*, 25(3): 487-494.
- Macky, K., Gardner, D., & Forsyth, S. 2008a. Generational differences at work: Introduction and overview. *Journal of Managerial Psychology*, 23(8): 857-861.
- Macky, K., Gardner, D., Forsyth, S., Twenge, J. M., & Campbell, S. M. 2008b. Generational differences in psychological traits and their impact on the workplace. *Journal of Managerial Psychology*, 23(8): 862-877.
- Malone, T. W., Yates, J., & Benjamin, R. I. 1987. Electronic markets and electronic hierarchies. *Communications of the ACM*, 30(6): 484-497.
- Mannheim, B. 1993. Gender and the Effects of Demographics, Status, and Work Values on Work Centrality. *Work and Occupations*, 20(1): 3-22.
- Mannheim, B., Baruch, Y., & Tal, J. 1997. Alternative Models for Antecedents and Outcomes of Work Centrality and Job Satisfaction of High-Tech Personnel. *Human Relations*, 50(12): 1537-1562.

- Mannix, E. A., & Loewenstein, G. F. 1993. Managerial time horizons and interfirm mobility: an experimental investigation. *Organizational Behavior and Human Decision Processes*, 56: 266-266.
- Matta, E., & Beamish, P. W. 2008. The accentuated CEO career horizon problem: evidence from international acquisitions. *Strategic Management Journal*, 29(7): 683-700.
- Mead, G. H. 1934. Mind, self and society Chicago. *The University of Chicago Press*.
- Meredith, WH, Abbott, DA, & Shu, LT (1989). A comparative study of only children and sibling children in the People's Republic of China. *School Psychology International*, 10: 251-256.
- Miller, K. D. 2002. Knowledge inventories and managerial myopia. *Strategic Management Journal*, 23(8): 689-706.
- Miller, R. 1995. Applying quality practices to R&D. *Research Technology Management*, 38(2): 47.
- Mintzberg, H. 1973. *The nature of managerial work*: Harper & Row.
- Moore, C. C., & Williamson, J. B. 2003. The Universal Fear of Death and The Cultural Response. In C. D. Bryant (Ed.), *Handbook of Death & Dying*: Sage.
- Navarrete, C. D., Kurzban, R., Fessler, D. M. T., & Kirkpatrick, L. A. 2004. Anxiety and Intergroup Bias: Terror Management or Coalitional Psychology? *Group Processes & Intergroup Relations*, 7(4): 370-397.
- Neimeyer, R. A., & Moore, M. K. 1994. Validity and reliability of the Multidimensional Fear of Death Scale. *Death anxiety handbook: Research, instrumentation, and application*: 103–119.
- Neimeyer, R. A., & Van Brunt, D. 1995. Death anxiety. In H. Wass, & R. A. Neimeyer (Eds.), *Dying: Facing the facts*, 3rd ed.: 49-88. Washington, DC: Taylor & Francis.
- Noble, C. H., & Walker, B. A. 1997. Exploring the relationships among liminal transitions, symbolic consumption, and the extended self. *Psychology and Marketing*, 14(1): 29-47.

- O'Reilly III, C. A., Main, B. G., & Crystal, G. S. 1988. CEO Compensation as Tournament and Social Comparison: A Tale of Two Theories. *Administrative Science Quarterly*, 33(2): 257-274.
- Olivier, B. 2011. Managing with ISO Systems: Lessons from Practice. *Long Range Planning*, 44(3): 197-220.
- Owens, T. 2006. Self and identity. *Handbook of social psychology*: 205-232.
- Palley, T. I. 1997. Managerial turnover and the theory of short-termism. *Journal of Economic Behavior & Organization*, 32(4): 547-557.
- Pentland, B. T. 1999. Organizations as networks of action. *Variations in Organization Science: In Honor of Donald T. Campbell, Thousand Oaks, CA: Sage*: 237-253.
- Peterson, R. S., Owens, P. D., Tetlock, P. E., Fan, E. T., & Martorana, P. 1998. Group dynamics in top management teams: Groupthink, vigilance, and alternative models of organizational failure and success. *Organizational behavior and human decision processes*, 73(2): 272-305.
- Podolny, J. M., & Phillips, D. J. 1996. The dynamics of organizational status. *Industrial and Corporate Change*, 5(2): 453-471.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5): 879.
- Poppo, L., & Zenger, T. 1998. Testing alternative theories of the firm: transaction cost, knowledge-based, and measurement explanations for make-or-buy decisions in information services. *Strategic Management Journal*, 19(9): 853-877.
- Porter, M. E. 1992. Capital disadvantage: America's failing capital investment system. *Harvard business review*, 70(5): 65.
- Powell, T. C. 1995. Total quality management as competitive advantage: A review and empirical study. *Strategic Management Journal*, 16(1): 15-37.
- Powell, T. C., Lovallo, D., & Fox, C. R. 2011. Behavioral strategy. *Strategic Management Journal*, 32(13): 1369-1386.

- Pronin, E., Steele, C. M., & Ross, L. 2004. Identity bifurcation in response to stereotype threat: Women and mathematics. *Journal of Experimental Social Psychology*, 40(2): 152-168.
- Pyszczynski, T., Greenberg, J., Solomon, S., Arndt, J., & Schimel, J. 2004. Why do people need self-esteem? A theoretical and empirical review. *Psychological Bulletin; Psychological Bulletin*, 130(3): 435.
- Rasmussen, C. A., & Brems, C. 1996. The relationship of death anxiety with age and psychosocial maturity. *The Journal of psychology*, 130(2): 141-144.
- Reicher, S., Spears, R., & Haslam, S. A. 2010. The social identity approach in social psychology. *The Sage identities handbook*: 45-62.
- Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. 2001. Measuring Global Self-Esteem: Construct Validation of a Single-Item Measure and the Rosenberg Self-Esteem Scale. *Personality and Social Psychology Bulletin*, 27(2): 151-161.
- Routledge, C., & Arndt, J. 2005. Time and terror: Managing temporal consciousness and the awareness of mortality. *Understanding behavior in the context of time: Theory, research, and applications*: 59-84.
- Sahaym, A., Steensma, H. K., & Schilling, M. A. 2007. The Influence of Information Technology on the Use of Loosely Coupled Organizational Forms: An Industry-Level Analysis. *Organization Science*, 18(5): 865-880.
- Salomon, R., & Jin, B. 2008. Does knowledge spill to leaders or laggards? Exploring industry heterogeneity in learning by exporting. *Journal of International Business Studies*, 39(1): 132-150.
- Salomon, R. M., & Shaver, J. M. 2005. Learning by Exporting: New Insights from Examining Firm Innovation. *Journal of Economics & Management Strategy*, 14(2): 431-460.
- Santos, F. M., & Eisenhardt, K. M. 2005. Organizational boundaries and theories of organization. *Organization science*, 16(5): 491-508.
- Sartre, J. P. 1948. *Existentialism is a Humanism*.
- Schein, E. H. 1970. *Organizational psychology*: Prentice-Hall Englewood Cliffs, NJ.

Schilling, M. A., & Steensma, H. K. 2001. The Use of Modular Organizational Forms: An Industry-Level Analysis. *The Academy of Management Journal*, 44(6): 1149-1168.

Schriber, J. B., & Gutek, B. A. 1987. Some time dimensions of work: Measurement of an underlying aspect of organization culture. *Journal of Applied Psychology; Journal of Applied Psychology*, 72(4): 642.

Scott, S. G., & Lane, V. R. 2000. A stakeholder approach to organizational identity. *Academy of Management Review*: 43-62.

Sharabi, M., & Harpaz, I. 2010. Improving employees' work centrality improves organizational performance: work events and work centrality relationships. *Human Resource Development International*, 13(4): 379-392.

Sherman, D. K., & Cohen, G. L. 2006. The psychology of self-defense: Self-affirmation theory. *Advances in experimental social psychology*, 38: 183-242.

Slemrod, J. 2003. Thanatology and Economics: The Behavioral Economics of Death. *American Economic Review*, 93(2): 371-375.

Smola, K. W., & Sutton, C. D. 2002a. Generational differences: Revisiting generational work values for the new millennium. *Journal of organizational behavior*, 23(SPI): 363-382.

Smola, W. K., & Sutton, C. D. 2002b. Generational differences: Revisiting generational work values for the new millennium. *Journal of Organizational Behavior*, 23(4): 363-382.

Solomon, S., Greenberg, J., & Pyszczynski, T. 1991. A Terror Management Theory of Social Behavior: The Psychological Functions of Self-Esteem and Cultural Worldviews. In P. Z. Mark (Ed.), *Advances in Experimental Social Psychology*, Vol. Volume 24: 93-159: Academic Press.

Soman, D., Ainslie, G., Frederick, S., Li, X., Lynch, J., Moreau, P., Mitchell, A., Read, D., Sawyer, A., & Trope, Y. 2005. The psychology of intertemporal discounting: Why are distant events valued differently from proximal ones? *Marketing Letters*, 16(3): 347-360.

Sonnenfeld, J. A. 1988. *The Hero's Farewell: What Happens When CEOs Retire*: Oxford University Press, USA.

Souder, D., & Bromiley, P. 2012. Explaining temporal orientation: Evidence from the durability of firms' capital investments. *Strategic Management Journal*, 33(5): 550-569.

Souder, D., & Shaver, J. M. 2010. Constraints and incentives for making long horizon corporate investments. *Strategic Management Journal*, 31(12): 1316-1336.

Staw, B. M., Sandelands, L. E., & Dutton, J. E. 1981. Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative science quarterly*: 501-524.

Stein, J. H., & Cropanzano, R. 2011. Death awareness and organizational behavior. *Journal of Organizational Behavior*, 32(8): 1189-1193.

Stets, J. E., & Burke, P. J. 2000. Identity theory and social identity theory. *Social Psychology Quarterly*: 224-237.

Tajfel, H. 1981. *Human groups and social categories: Studies in social psychology*: Cambridge Univ Pr.

Tajfel, H. 1982. Social psychology of intergroup relations. *Annual review of psychology*, 33(1): 1-39.

Taylor, J. R., & Van Every, E. J. 2000. *The emergent organization: Communication as its site and surface*: Lawrence Erlbaum.

Templer, D. I. 1970. The construction and validation of a death anxiety scale. *The Journal of general psychology*, 82(2): 165-177.

Templer, D. I., Ruff, C. F., & Franks, C. M. 1971. Death anxiety: Age, sex, and parental resemblance in diverse populations. *Developmental Psychology*, 4(1, Pt.1): 108-108.

Tian, K., & Belk, Russell W. 2005. Extended Self and Possessions in the Workplace. *Journal of Consumer Research*, 32(2): 297-310.

Tolstoy, L. 1886. The Death of Ivan Ilyich.

Tomer, A., & Eliason, G. 1996. Toward a comprehensive model of death anxiety. *Death Studies*, 20(4): 343-365.

Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. 1994. Self and collective: Cognition and social context. *Personality and social psychology bulletin*, 20: 454-454.


- Turner, M. E., & Pratkanis, A. R. 1998. A social identity maintenance model of groupthink. *Organizational behavior and human decision processes*, 73(2): 210-235.
- Tversky, A., & Kahneman, D. 1974. Judgment under uncertainty: Heuristics and biases. *Science*, 185(4157): 1124-1131.
- Twenge, J. M. 2010. A review of the empirical evidence on generational differences in work attitudes. *Journal of Business and Psychology*, 25(2): 201-210.
- Twenge, J. M., & Campbell, S. M. 2008. Generational differences in psychological traits and their impact on the workplace. *Journal of Managerial Psychology*, 23(8): 862-877.
- Urien, B. 2003. L'anxiété face à la mort et son influence sur le comportement du consommateur. *Recherche et applications en marketing*: 23-41.
- Urien, B. 2007. Selfless Time From life space to death anticipation. *Time & Society*, 16(2-3): 367-386.
- Van Maanen, J. E., & Schein, E. H. 1977. Toward a theory of organizational socialization.
- Venkatraman, N. 1989. The concept of fit in strategy research: Toward verbal and statistical correspondence. *Academy of management review*, 14(3): 423-444.
- Vigilant, L., & Williamson, J. B. 2003. Symbolic Immortality and Social Theory: The Relevance of an Underutilized Concept. In C. D. Bryant (Ed.), *Handbook of Death & Dying*. Newbury Park, CA: Sage.
- Wahal, S., & McConnell, J. J. 2000. Do institutional investors exacerbate managerial myopia? *Journal of Corporate Finance*, 6(3): 307-329.
- Wegner, D. M. 1994. Ironic processes of mental control. *Psychological Review*, 101(1): 34-52.
- Wegner, D. M., & Smart, L. 1997. Deep Cognitive Activation: A New Approach to the Unconscious. *Journal of consulting and clinical psychology*, 65: 984-995.
- Weick, K. E. 1995. *Sensemaking in organizations*: Sage Publications, Inc.
- Whittington, R. 1991. Changing control strategies in industrial R&D. *R&D Management*, 21(1): 43-53.

- Whittington, R., Pettigrew, A., Simon, P., Fenton, E., & Conyon, M. 1999. Change and Complementarities in the New Competitive Landscape: A European Panel Study, 1992-1996. *Organization Science*, 10(5): 583-600.
- Whyte, G. 1993. Escalating commitment in individual and group decision making: A prospect theory approach. *Organizational behavior and human decision processes*, 54(3): 430-455.
- Williamson, O. E. 1983. *Markets and hierarchies, analysis and antitrust implications*: Free Press.
- Worrell, D. L., & Davidson, W. N. 1987. The effect of CEO succession on stockholder wealth in large firms following the death of the predecessor. *Journal of Management*, 13(3): 509-515.
- Worrell, D. L., Davidson, W. N., Chandy, P. R., & Garrison, S. L. 1986. Management turnover through deaths of key executives: effects on investor wealth. *Academy of Management Journal*, 29(4): 674-694.
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. 1997. Jobs, Careers, and Callings: People's Relations to Their Work. *Journal of Research in Personality*, 31(1): 21.
- Zbaracki, M. J. 1998. The rhetoric and reality of total quality management. *Administrative Science Quarterly*: 602-636.
- Zellweger, T. 2007. Time horizon, costs of equity capital, and generic investment strategies of firms. *Family Business Review*, 20(1): 1-15.
- Zenger, T. R., & Hesterly, W. S. 1997. The disaggregation of corporations: Selective intervention, high-powered incentives, and molecular units. *Organization Science*, 8(3): 209-222.

Appendix 1

Essay 1 - Survey “Work perception”

Work Perception English



Tilburg University is conducting a survey on work perceptions in organizations. Your participation is highly appreciated and filling in the survey will take about 5 - 10 minutes of your time.
Your answers to the questionnaire as well as your information are strictly confidential and anonymous, and will not be shared with outside parties.
Thank you for your time and willingness to participate in this survey!

***1. Gender**

☐ Male

☐ Female

***2. In what year were you born? (please select from box)**

Year

Year of Birth

***3. Citizenship (please select from box)**

Country of citizenship

What is your country of citizenship?

***4. Years worked**

Amount of years worked

How many years have you done paid work in total?

***5. What is your current marital status?**

☐ Single

☐ In relationship, not living together

☐ Living Together

☐ Engaged

☐ Married

☐ Divorced

☐ Divorced but in a new relationship

☐ Widow/widower

☐ Widow/widower in a new relationship

***6. How many children do you have**

Children

How many children do you have (please select 0 for none)

Work Perception English
<p>*7. What is the highest level of school you have completed or the highest degree you have received?</p> <p> <input type="radio"/> Primary School <input type="radio"/> Low professional degree <input type="radio"/> High School <input type="radio"/> High professional degree <input type="radio"/> Bachelor degree or equivalent <input type="radio"/> Masters Degree or equivalent <input type="radio"/> PhD degree </p> <p>*8. What is your current work status?</p> <p> <input type="radio"/> Full Time <input type="radio"/> Part Time <input type="radio"/> Unemployed <input type="radio"/> Other </p> <p>Other (please specify)</p> <div></div> <p>*9. What is your main job function or title?</p> <div></div> <p>*10. How many people work for the organization you are currently employed by?</p> <p> <input type="radio"/> 0 - 9 <input type="radio"/> 10 - 49 <input type="radio"/> 50 - 249 <input type="radio"/> 250 - 499 <input type="radio"/> 500 - 999 <input type="radio"/> 1000 or more </p> <p>*11. How many people do you supervise?</p> <p> <input type="radio"/> None <input type="radio"/> 1 person <input type="radio"/> 2 - 10 people <input type="radio"/> 11 or more people </p>

Work Perception English

*12. How many years have you worked for your current employer?

- ☐ less than 1 year
- ☐ 1 - 2 years
- ☐ 3 - 6 years
- ☐ 7 or more

*13. In what sector do you work? (please select the main sector if it falls in various sectors)

- ☐ Agriculture, forestry, fishery, hunting
- ☐ Business services (including real estate, rental)
- ☐ Catering
- ☐ Construction
- ☐ Education
- ☐ Environmental services, culture, recreation and other services
- ☐ Financial
- ☐ Government services, public administration and mandatory social insurances
- ☐ Health and welfare
- ☐ Industrial production
- ☐ Mining
- ☐ Retail trade (including repairs of consumer goods)
- ☐ Transport, storage and communication
- ☐ Utilities production, distribution and/or trade (electricity, natural gas, steam, water)
- ☐ Other

Other (please specify)

*14. In what type of organization do you work?

- ☐ Governmental, semi-governmental
- ☐ Commercial business
- ☐ My own company
- ☐ Non-profit
- ☐ Other

Other (please specify)

Work Perception English

***15. Please indicate how often the following statements characterize yourself in the workplace:**

	Never	Very rarely	Rarely	Sometimes	Often	Very often	Always
I have demonstrated originality in my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have found new uses for existing methods or equipments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have solved problems that have caused others difficulties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have tried out new ideas and approaches to problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***16. For each of the following statements, please indicate to what extent it applies to yourself in your workplace:**

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talk up this organization to my friends as a great organization to work for.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would accept almost any type of job assignment in order to keep working for this organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find that my values and the organization's values are very similar.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am proud to tell others that I am part of this organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This organization really inspires the very best in me in the way of job performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I really care about the fate of this organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For me this is the best of all possible organizations for which to work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***17. For each of the following statements, please indicate to what extent it applies to yourself:**

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
I plan for the long term	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I work hard for success in the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't mind giving up today's fun for success in the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traditional values are important to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Work Perception English							
*26. Please check which applies to you, either Yes or No:							
	Yes	No					
Are you a member of a political party?	<input type="radio"/>	<input type="radio"/>					
Are you a member of a religious organization?	<input type="radio"/>	<input type="radio"/>					
Are you on an organ donation list?	<input type="radio"/>	<input type="radio"/>					
Do you donate blood?	<input type="radio"/>	<input type="radio"/>					
*27. How long ago did any event in your personal life or your surrounding lead you to think actively about death?							
<input type="radio"/> Never <input type="radio"/> 1 month <input type="radio"/> 6 months <input type="radio"/> 1 year <input type="radio"/> 1 - 5 years <input type="radio"/> More than 5 years							
*28. Life after death...							
	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
There is a form of life after death	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My behavior during life will influence what happens to me after my death	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is possible to interact with the current world after death	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Work Perception English

*29. To what extent do you agree with the following statements?

	Strongly disagree	Disagree	Slightly Disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
I am very much afraid to die.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The thought of death seldom enters my mind.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It doesn't make me nervous when people talk about death.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I dread to think about having to have an operation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not at all afraid to die.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not particularly afraid of getting cancer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The thought of death never bothers me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am often distressed by the way time flies so rapidly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I fear dying a painful death.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The subject of life after death troubles me greatly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am really scared of having a heart attack.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often think about how short life really is.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I shudder when I hear people talking about World War II.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The sight of a dead body is horrifying to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that the future holds nothing for me to fear.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I act as if life is unlimited.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am conscious of the inevitability of death.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am preparing for what will happen after my own death.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix 2

Essay 3 - Variables definition

Variable	Description
External R&D	Logarithm of external R&D spending measured in thousands of Euros in year t
Quality management	Dummy variable equals to 1 if firm invested in quality control and normalization initiatives in year t, 0 otherwise
IT investment	Dummy variable equals to 1 if firm invested in information technologies in year t, 0 otherwise
Internationalization	Dummy variable equals to 1 if firm has access to foreign markets (through exports or FDI) and 0 if firm is purely domestic during 1990-2008
Size	Firm size measured as the logarithm of sales
Foreign capital	A dummy variable which equals 1 if a firm has foreign capital in its ownership structure in year t, and 0 otherwise
Diversification	Number of products a firm has in year t
Commoditization	Dummy variable equals to 1 if firm has standardized products in year t (mostly the same for all buyers), 0 otherwise